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of Transportation

**National Highway
Traffic Safety
Administration**

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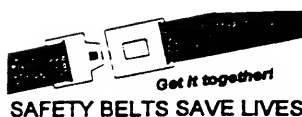
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Indiana University
Bloomington, Indiana 47403-1599

ON-SITE AIR BAG INVESTIGATION

CASE NO. - 96-20
FLEET - PRIVATE VEHICLE
LOCATION -
ACCIDENT DATE - 1996

Submitted By:

Senior Staff Associate
and

Associate Scientist

1997

Revised Submission:

2001

Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590-0003

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

Technical Report Documentation Page

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15. Supplementary Notes On-site air bag deployment investigation involving a 1996 Chevrolet Cavalier, two-door coupe, with manual belts and dual front air bags					
16. Abstract This report covers an on-site investigation of an air bag deployment crash that involved a 1996 Chevrolet Cavalier which ran-off-road and impacted a culvert. This crash is of special interest because the Cavalier's right front passenger (5 year-old female) sustained fatal head injuries, allegedly from her deploying right front air bag. The Cavalier was traveling southeast in the southeast lane of a two-lane, undivided, state roadway when it veered off the roadway to the right. The Cavalier traveled approximately 29 meters (95 feet) along a drainage ditch prior to impacting the culvert. The front bumper and undercarriage of the Cavalier (case vehicle) impacted the culvert causing the case vehicle's driver side and right front passenger side supplemental restraints (air bags) to deploy. The case vehicle came to an abrupt stop after impact and was heading southeast at final rest. The case vehicle's driver (17 year-old female) was normally postured, with her seat track located in its forward-most position. The Cavalier was not equipped with a tilt steering wheel. She was not wearing her available, active, three-point, lap and shoulder belt and sustained, according to her interview, minor injuries which included: a bruise to her right forearm from the driver side air bag and bilateral knee contusions from the left side knee bolster. The right front passenger in the case vehicle (5 year-old female) was abnormally postured [i.e., lying down to the left (towards the Cavalier's driver), with her head laying partially on the driver's right thigh], with her seat track located between its middle and forward-most positions, and she was not wearing her available, active, three-point, lap and shoulder belt. She sustained, according to the interview with the Cavalier's driver (i.e., aunt) and her medical records, fatal injuries which included: a compound, depressed, right frontoparietal skull fracture and multiple critical brain lesions (i.e., a loss of consciousness, midbrain and intraventricular hemorrhages, epidural, intracerebral, and subdural hematomas, a cerebral contusion, and cerebral edema). Based on the available evidence, the brain and skull injuries resulted when this occupant's head came in contact with the center dash. In addition, she sustained a left pubic ramus fracture when she hit the floor-mounted transmission selector lever and bilateral leg fractures (i.e., proximal tibia and distal tibia and fibula), possibly from the deploying air bag.					
17. Key Words Air Bag Deployment		Motor Vehicle Traffic Crash Injury Severity		18. Distribution Statement General Public	
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TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 96-20

FLEET - PRIVATE VEHICLE
LOCATION -

SUMMARY

This report concerns a motor vehicle crash involving an air bag equipped 1996 Chevrolet Cavalier, two-door coupe, which ran-off-road and impacted a culvert. This crash occurred in 1996 at 5:23 p.m., in a rural area on a state road. This crash is of special interest because the Cavalier's right front passenger (5 year-old female) sustained fatal head injuries, allegedly from her deploying right front air bag.

The Cavalier was traveling southeast in the southeast lane of a two-lane, undivided, state roadway when it veered off the roadway to the right. The Cavalier traveled approximately 29 meters (95 feet) along a drainage ditch prior to impacting the culvert. The Cavalier came to an abrupt stop after impact and was heading southeast at final rest.

The front bumper and undercarriage of the Cavalier impacted the culvert. The Cavalier was towed due to damage from the scene. The direct damage was distributed across the entire front end of the Cavalier with the max crush being 28 centimeters (11.0 in.) near C₄. The wheelbase on the left (driver) side was shortened 9 centimeters (3.5 inches). The CDC was determined to be: 12-FDLW-2 for the Cavalier. The SMASH reconstruction program, barrier algorithm, was used on the highest severity impact to the Cavalier. The Total, Longitudinal, and Lateral Delta V's are respectively: 22 km.p.h. (14 m.p.h.), -22 km.p.h. (-14 m.p.h.), and 0 km.p.h. (0 m.p.h.). These resultants seemed low to this contractor.

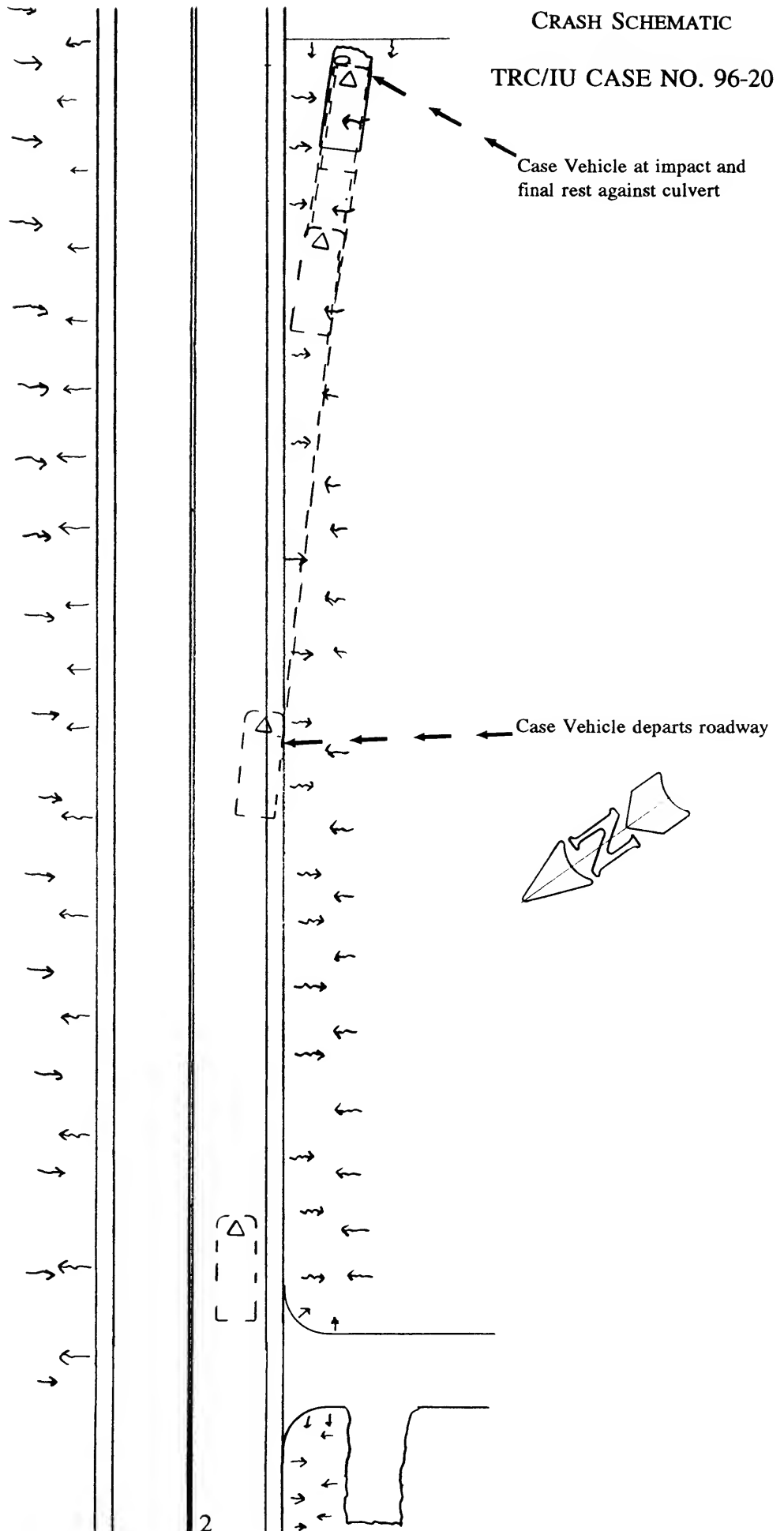
The 1996 Chevrolet Cavalier was equipped with both driver and right front passenger supplemental restraint systems (air bags) which deployed as a result of the frontal impact. The driver of the Cavalier [year-old female--160 centimeters (63 inches), 54 kilograms (120 pounds)] was normally postured, with her seat track located in its forward-most position. The Cavalier was not equipped with a tilt steering wheel. She was not wearing her available, active, three-point, lap and shoulder belt and sustained, according to her interview, minor injuries which included: a bruise to her right forearm from the driver side air bag and bilateral knee contusions from the left side knee bolster. The right front passenger (year-old female--unknown height weight) in the Cavalier was abnormally postured [i.e., lying down to the left (towards the Cavalier's driver), with her head laying partially on the driver's right thigh], with her seat track located between its middle and forward-most positions, and she was not wearing her available, active, three-point, lap and shoulder belt. She sustained, according to the interview with the Cavalier's driver (i.e., aunt) and her medical records, fatal injuries which included: a compound, depressed, right frontoparietal skull fracture and multiple critical brain lesions (i.e., a loss of consciousness, midbrain and intraventricular hemorrhages, epidural, intracerebral, and subdural hematomas, a cerebral contusion, and cerebral edema). Based on the available evidence, the brain and skull injuries resulted when this occupant's head came in contact with the center dash. In addition, she sustained a left pubic ramus fracture when she hit the floor-mounted transmission selector lever and bilateral leg fractures (i.e., proximal tibia and distal tibia and fibula), possibly from the deploying air bag.

CRASH SCHEMATIC

TRC/IU CASE NO. 96-20

Scale: 1 cm = 2.5 m
(prior to reduction @ 94%)

Road Surface: Asphalt
Road Condition: Dry
Curvature: Straight
Grade, pre-impact= Level
(i.e., < 2 %; actual grade
is +1.0 % to the southeast)
Grade of culvert's
earthen sides = -96 %



TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 96-20

FLEET - PRIVATE VEHICLE
LOCATION -

ACCIDENT DATA

Location/Street:	State Road
State:	
Area/Type:	Rural, residential
Accident Date/Time:	1996, @ 5:23 p.m.
Investigating Police Agency:	County Sheriff Department
Accident Type:	Car - ran-off-road (head-on into culvert)
Occupant Injury Severity (air bag vehicle):	Brain stem hemorrhage, loss of consciousness, right epidural hematoma, left subdural hematoma (all AIS-5)

VEHICLE DAMAGE

EXTERIOR

Case Vehicle

Deployment Impact

Event number:	First
Object Struck:	Culvert
Damage location	
Damaged Plane:	Front
Vertical Location	
On Plane:	Bumper and below
Direct Begins:	Bumper corner to bumper corner
Length Direct:	114 cm (44.9 in)
Field L:	114 cm (44.9 in)
C ₁ :	0 cm (0.0 in)
C ₂ :	12 cm (4.7 in)
C ₃ :	16 cm (6.3 in)
C ₄ :	27 cm (10.6 in)
C ₅ :	11 cm (4.3 in)
C ₆ :	5 cm (2.0 in)
D:	0 cm (0.0 in)
Maximum Crush:	28 cm (11.0 in)
Location:	Near C ₄

VEHICLE DAMAGE (CONTINUED)

EXTERIOR (Continued)**Case Vehicle****Deployment Impact** (Continued)

CDC:

12-FDLW-2 (00)

Damaged Components:

Bumper, hood, splash pan, radiator, left front wheel assembly, left and right fender, left and right front door assemblies, and hood

VEHICLE VELOCITY ESTIMATES

Highest Delta "V"**Case Vehicle**

Reconstruction Program:

SMASH

Program Algorithm:

Damage only, barrier option

Travel Speed:

25 k.p.h. (16 m.p.h.)

Total Delta "V":

22 k.p.h. (14 m.p.h.)

Longitudinal Delta "V":

-22 k.p.h. (-14 m.p.h.)

Lateral Delta "V":

0 k.p.h. (0 m.p.h.)

CASE VEHICLE DRIVER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Contusion right forearm	790402.1,1	7	Air bag, driver's side	{Probable}
Contusion left knee	890402.1.2	7	Driver side knee bolster, left dash	{Certain}
Contusion right knee	890402.1,2	7	Driver side knee bolster, center dash	{Certain}

CASE VEHICLE RIGHT FRONT PASSENGER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Loss of consciousness (unresponsive to painful stimuli, decerebrate and decorticate posturing, pupils fixed and dilated, and deviated pupils)	160214.5,0	2	Center instrument panel (see SELECTED PHOTOGRAPHS #40 and #41)	{Certain}

CASE VEHICLE RIGHT FRONT PASSENGER INJURIES (CONTINUED)

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Hemorrhage in midbrain	140210.5,8	2	Center instrument panel	{Certain}
Cerebral contusion between left basal ganglia and thalamus	140604.3,2	2	Center instrument panel	{Certain}
Hematoma, epidural, large, right frontoparietal	140636.5,1	2	Center instrument panel	{Certain}
Hematoma, intracerebral, NFS, right frontoparietal--adjacent to epidural site	140638.4,1	2	Center instrument panel	{Certain}
Hematoma, subdural, large, left frontoparietal	140656.5,2	2	Center instrument panel	{Certain}
Cerebral edema, mild but never suitably controlled	140670.3,9	2	Center instrument panel	{Certain}
Hemorrhage, intraventricular, left and third ventricles and cerebral aqueduct	140678.4,9	2	Center instrument panel	{Certain}
Fracture, compound, right frontoparietal skull, slight depressed and comminution	150404.3,1	2	Center instrument panel	{Certain}
Fracture left pubic ramus	852600.2,2	2	Console mounted transmission selector level	{Probable}
Fracture, with displacement, right distal fibula	851610.2,1	2	Air bag, passenger's side	{Possible}
Fracture, with displacement, right distal tibia	853414.2,1	2	Air bag, passenger's side	{Possible}
Fracture, with displacement (Salter-1), left proximal tibial physis	853422.3,2	2	Air bag, passenger's side	{Possible}
Abrasion right distal shin	890202,1,1	3	Air bag, passenger's side	{Probable}

DISCUSSION

This report concerns a motor vehicle crash involving an air bag equipped 1996 Chevrolet Cavalier which ran-off-road and impacted a culvert. This crash is of special interest because the Cavalier's right front passenger (5 year-old female--unknown height and weight) sustained fatal head injuries, allegedly from her deploying right front air bag.

The Cavalier (case vehicle) was traveling southeast in the southeast lane of a two-lane, undivided, state roadway when it veered off the roadway to the right. According to the Police Accident Report and the scene evidence, the case vehicle traveled approximately 29 meters (95 feet) along a drainage ditch prior to impacting the culvert. Based on the scene inspection, there was no evidence of any attempted avoidance maneuvers. The impact caused the case vehicle's driver side and right front passenger side supplemental restraint systems (air bags) to deploy. According to the case vehicle's driver [17 year-old female--160 centimeters (63 inches), 54

DISCUSSION (CONTINUED)

kilograms (120 pounds)], she was distracted by the right front passenger who at the time was laying across the front seat with her head partially on the driver's right leg. According to the case vehicle's driver, she was attempting to get the right front passenger back into the proper seating position when she veered off the right (southwest) side of the road.

The front bumper and undercarriage of the case vehicle impacted the culvert and came to a abrupt stop heading southeast. The direct damage was distributed across the entire front end of the case vehicle with the max crush being 28 centimeters (11.0 in.) near C₄. The wheelbase on the left (driver) side was shortened 9 centimeters (3.5 inches). The CDC for the case vehicle was determined to be 12-FDLW-2. The SMASH reconstruction program, damage only, barrier option algorithm, was used on the culvert impact. The Total. Longitudinal, and Lateral Delta V's are respectively: 22 km.p.h. (14 m.p.h.), -22 km.p.h. (-14 m.p.h.), and 0 km.p.h. (0 m.p.h.). These resultants seemed low to this contractor considering that the posted speed limit is 89 km.p.h. (55 m.p.h.), and there was no evidence of braking¹ prior to impact.

According to the case vehicle's driver, immediately prior to the crash she was normally postured (i.e., seated upright with her back against the seatback, and at least one hand on the steering wheel²). According to the case vehicle's driver, her seat track was located in its forward-most position, and her seatback was completely upright. According to the vehicle inspection, the case vehicle's driver seat track was in the forward-most position with the seatback in the slightly reclined position. This contractor believes that the young driver was not sure or just did not know the exact seatback position. The case vehicle was not equipped with a tilt steering wheel. According to the driver's interview, she was also restrained by the her available, active, three-point, lap and shoulder belt. The Police Accident Report was encoded as unknown belt usage.

Based on the Police Accident Report, the vehicle and scene inspections, and occupant kinematic principles, the case vehicle's impact with the culvert, not only deployed the driver side air bag, but thrust the driver forward and upward where she contacted the deploying air bag, loaded the steering column, and contacted the knee bolster with her knees (i.e., see **SELECTED PHOTOGRAPH #34**). Subsequently, the air bag redirected the driver upwards where she contacted the sunvisor (i.e., see **SELECTED PHOTOGRAPH #38**).

According to the vehicle inspection, the steering column was collapsed (i.e., stroked) approximately 5 centimeters (2 inches), indicating that the driver significantly loaded her air bag as she was thrown forward at impact. An inspection of the case vehicle's driver side air bag revealed what appeared to be oil and skin transfers to the right side of the air bag indicating contact by the case vehicle's driver. Based on the lack of driver reported seatbelt pattern bruising and the lack of loading evidence (moderate speed crash) found on the driver's belt system, this contractor believes that no safety belts were used. It should be noted that the case vehicle was not equipped with a shoulder belt adjustor. According to the case vehicle's driver, she sustained a bruise to her right forearm from the air bag and bilateral knee contusions from the driver side

¹ The case vehicle most likely decelerated from the point where it left the roadway to the point of impact by the driver removing her foot from the accelerator.

² According to the case vehicle's driver, she could not recall exactly where her feet were positioned or which hand(s) were on the steering wheel.

DISCUSSION (CONTINUED)

knee bolster. As a result of the driver's sunvisor contact, she rebounded back into her seat. According to the case vehicle's driver, she had no recollection of how she moved in the vehicle before, during, or after the crash.

At final rest the case vehicle's driver could only recall getting out and going around to the passenger side of the vehicle and removing the right front occupant. It should be noted that the case vehicle's driver seemed reluctant to provide any information pertaining to the crash. She would not respond to questions when asked and did not seem the least bit interested in what this contractor was there trying to do.

According to the case vehicle's driver (i.e., aunt), immediately prior to the crash the right front passenger was abnormally postured [i.e., lying down to the left (towards the case vehicle's driver), with her head laying partially on the driver's right thigh]. In addition, the driver could neither recall if the right front passenger's legs were laying across the seat cushion or hanging down over edge of cushion, nor where her hands were. According to the case vehicle's driver, the right front passenger's seat track was located between its middle and forward-most positions, with the seatback completely upright. According to the vehicle inspection, the right front passenger's seat track was between the middle and forward-most positions, with the seatback almost completely reclined. This contractor believes that the case vehicle's young driver was either not sure or just did not know the exact position or the seatback. According to the driver's interview, she could not recall if this occupant was wearing her available, active, three-point, lap and shoulder belt. It should be noted that the case vehicle was not equipped with a shoulder belt adjuster. The Police Accident Report was coded as no belt usage. Based on this passenger's medical records and the lack of loading evidence (moderate speed crash) found on this occupant's belt system, this contractor has concluded that no safety belts were used.

Based on the Police Accident Report, the vehicle and scene inspections, and occupant kinematic principles, the case vehicle's impact with the culvert not only deployed the right front air bag, but thrust the right front passenger forward and slight upward where she contacted the center instrument panel, floor mounted transmission selector lever, and deploying right front air bag. Based on this occupant's pre-crash posture, the case vehicle's impact with the culvert would have thrown this occupant's head forward where the vehicle inspection found a contact to the corner of the padded center dash (see **SELECTED PHOTOGRAPHS #40 and #41**). In addition, the inspection of the right front air bag revealed what appeared to be oil and skin transfers to the left edge of the air bag indicating possible contact with this occupant's legs.

According to the right front passenger's medical records, she sustained a compound, depressed, right frontoparietal skull fracture and multiple critical brain lesions. Based on the available evidence, the brain and skull injuries resulted from this occupant's head contact with the dash. In addition, she sustained a left pelvic fracture (i.e., left pubic ramus) when she hit the transmission selector lever and bilateral leg fractures, possibly from the deploying air bag. The air bag then thrust this occupant back into her seatback.

According to the case vehicle's driver, at final rest all she could recall was that the passenger was still laying similar to her pre-crash position, prior to removing her. Based on the vehicle inspection (blood drainage along the outside of right front seat cushion), this contractor believes this occupant's legs were laying towards the right over the outside of the seat cushion.

Appendix A:

SMASH PROGRAM RESULTS

(DAMAGE ONLY ALGORITHM

-- INCLUDING

BARRIER EQUIVALENT SPEEDS)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

SMASH PROGRAM SUMMARY

(All Measurements in Metric)

BEST AVAILABLE

NATIONAL ACCIDENT-SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title

10 9620 01 1 1
Primary Case No.-Stratum Accident Event Date (Month, day, year) of Run
Sampling Unit Sequence No.

GENERAL INFORMATION

VEHICLE 1		VEHICLE 2	
NASS Vehicle Number	<u>01</u>	NASS Vehicle Number	_____
Year	<u>1996</u>	Year	_____
Make	<u>Chevrolet</u>	Make	_____
Model	<u>Cavalier</u>	Model	_____
Body Style	<u>2S</u>	Body Style	_____
CDC	<u>12FDLW2</u>	CDC	<u>BARRIER</u>
PDOF	± <u>0</u> °	PDOF	± _____°
Heading Angle	± <u>134</u> °	Heading Angle	± _____°

VEHICLE SPECIFICATIONS

VEHICLE 1		VEHICLE 2	
Wheelbase	<u>264</u> cm	Wheelbase	_____ cm
Overall Length	<u>458</u> cm	Overall Length	_____ cm
Overall Width	<u>171</u> cm	Overall Width	_____ cm
Weight	<u>1249</u> + <u>73</u> + <u>0</u> = <u>1322</u> kg	Weight	_____ + _____ + _____ = _____ kg
Curb Occupant(s) Cargo		Curb Occupant(s) Cargo	
Engine Displacement	<u>2.2</u> L	Engine Displacement	_____ L
Drive System	<u>FWD</u>	Drive System	_____
Size	<u>2</u>	Size	_____
Stiffness	<u>9</u>	Stiffness	_____

DAMAGE INFORMATION

VEHICLE 1		VEHICLE 2	
Damage Known?	<u>Y</u>	Damage Known?	_____
Damage Length	<u>132</u> cm	Damage Length	_____ cm
Damage Offset	± <u>0</u> cm	Damage Offset	± _____ cm
Crush Depth:		Crush Depth:	
C1	<u>0</u> cm	C1	_____ cm
C2	<u>12</u> cm	C2	_____ cm
C3	<u>16</u> cm	C3	_____ cm
C4	<u>27</u> cm	C4	_____ cm
C5	<u>11</u> cm	C5	_____ cm
C6	<u>5</u> cm	C6	_____ cm

SCENE INFORMATION

Rest and Impact Positions ☐ No ☐ Yes

VEHICLE 1

Rest X _____ m
 Position Y _____ m
 Heading Angle _____ °
 Impact X _____ m
 Position Y _____ m
 Heading Angle _____ °
 Slip Angle (-180 to +180) _____ °

VEHICLE 2

Rest X _____ m
 Position Y _____ m
 Heading Angle _____ °
 Impact X _____ m
 Position Y _____ m
 Heading Angle _____ °
 Slip Angle (-180 to +180) _____ °

VEHICLE MOTION

Sustained Contact ☐ No ☐ Yes

VEHICLE 1

Vehicle Rotation ☐ No ☐ Yes
 Rotation Stop Before Rest ☐ No ☐ Yes
 End of Rotation X _____ m
 Position Y _____ m
 Heading Angle _____ °

Curved Path ☐ No ☐ Yes

Point on Path

X _____ m Y _____ m

Rotation Direction ☐ None ☐ CW ☐ CCWRotation > 360° ☐ No ☐ YesSustained Contact ☐ No ☐ Yes

VEHICLE 2

Vehicle Rotation ☐ No ☐ Yes
 Rotation Stop Before Rest ☐ No ☐ Yes
 End of Rotation X _____ m
 Position Y _____ m
 Heading Angle _____ °

Curved Path ☐ No ☐ Yes

Point on Path

X _____ m Y _____ m

Rotation Direction ☐ None ☐ CW ☐ CCWRotation > 360° ☐ No ☐ Yes

FRICTION INFORMATION

Coefficient of Friction

Rolling Resistance Option

1

Vehicle 1 Rolling Resistance

LF _____
 RF _____
 LR _____
 RR _____

Vehicle 2 Rolling Resistance

LF _____
 RF _____
 LR _____
 RR _____

IF THIS COMMON IMPACT WAS WITH A CDS VEHICLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.

Model Year: _____

Make: _____

Model: _____

VIN: _____

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate
 damage sketch and dimensions to the form

1997

Summary of Results Using Damage

Page 1

Special Crash Investigations, TRC/IU 96-20, Task 0060

Speed Change
(Damage)

Vehicle #1

Total 22 km/h (14 mph)
 Longitudinal -22 km/h (-14 mph)
 Latitudinal 0 km/h (0 mph)
 PDOF Angle 0 $\frac{1}{2}$
 Energy Dissipated = 24547 Joules (18102 Ft-Lb)
 Barrier Equivalent Speed = 21.9 km/h (13.6 mph)
 Calculated using crush coefficients entered by the user.

Vehicle #2

Total 0 km/h (0 mph)
 Longitudinal 0 km/h (0 mph)
 Latitudinal 0 km/h (0 mph)
 PDOF Angle 0 $\frac{1}{2}$
 Energy Dissipated = 0 Joules (0 Ft-Lb)
 Barrier Equivalent Speed = 0.0 km/h (0.0 mph)
 Calculated using size and stiffness categories.

General Information

	Vehicle #1 áááááááááá	Vehicle #2 áááááááááá
Year	1996	1900
Make	Chevrolet	
Model	Cavalier	
CDC	12FDLW2	BARRIER
Side Damaged	F	
PDOF Angle	0 $\frac{1}{2}$	0 $\frac{1}{2}$
Heading Angle	134 $\frac{1}{2}$	0 $\frac{1}{2}$

Calculation method: Vehicle's Crush Coeff. Size and Stiffness

Size Category	**	11
Stiffness Category	**	11
Vehicle Weight	**	453592 kgs (999999 lbs)
d0 crush coeff.	99.19 sqrt(N)	***** sqrt(N)
d1 crush coeff.	6.47 sqrt(N)/cm	***** sqrt(N)/cm

1997

Page 2

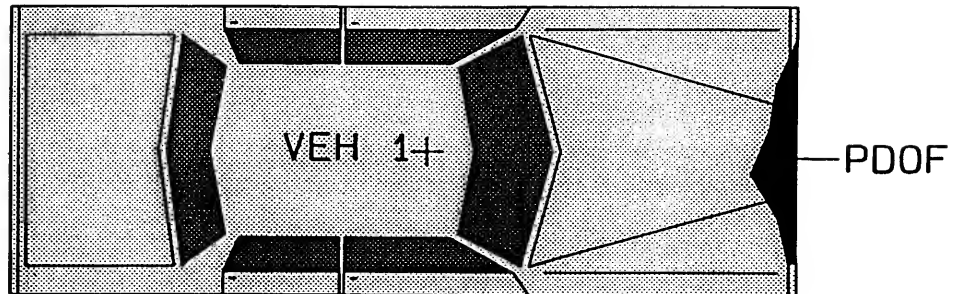
Damage Information

	Vehicle #1 áááááááááááá Yes	Vehicle #2 áááááááááááá Yes
Vehicle Damage Known		
Crush Length	132.0 cm (52 in)	0.0 cm (0 in)
C1	0.0 cm (0 in)	0.0 cm (0 in)
C2	12.0 cm (5 in)	0.0 cm (0 in)
C3	16.0 cm (6 in)	0.0 cm (0 in)
C4	27.0 cm (11 in)	0.0 cm (0 in)
C5	11.0 cm (4 in)	0.0 cm (0 in)
C6	5.0 cm (2 in)	0.0 cm (0 in)
D	0.0 cm (0 in)	0.0 cm (0 in)
D'	3.6 cm (1 in)	0.0 cm (0 in)

Vehicle Dimensions

	Vehicle #1 áááááááááááá	Vehicle #2 áááááááááááá
Length	458.0 cm (180 in)	0.0 cm (0 in)
Width	171.0 cm (67 in)	0.0 cm (0 in)
Wheelbase	264.0 cm (104 in)	254.0 cm (100 in)
Weight	1322 kgs (2915 lbs)	453592 kgs (999999 lbs)
CG to Front of Veh	211.6 cm (83 in)	127.0 cm (50 in)
Engine Displacement	2.2 liters	0.0 liters
Moment of Inertia	250531 kgs (22175 lbs)	29375740821 kgs (2600101632 l
Vehicle Mass	1322 kgs (7.6 lb-s^2/in)	453515 kgs (2600.1 lb-s^2/in)

1996 Chevrolet Cavalier



Special Crash Investigations, TRC/IU 96-20, Task 0060
1997

CASE NUMBER IN9620

**NO
DATA**

The following page(s) were left intentionally blank.

PAGE NUMBER(S)

9-11

Appendix B:

SELECTED PHOTOGRAPHS

A total of fifty color copies of photographs are presented and referenced as Photograph #01 through Photograph #50. All of these photographs were taken by the Transportation Research Center.



01: Case vehicle's southeastward path of travel in southeastbound lane approximately 70 meters (230 feet) from impact



02: Case vehicle's southeastward path of travel approximately 60 meters (197 feet) from impact

On-Site Scene View of Crash Involving a 1996 Chevrolet Cavalier (Case Vehicle)



03: Case Vehicle's southeastward travel path near point of roadway departure approximately 35 meters (115 feet) from impact



04: Case Vehicle's off road path of travel entering ditch approximately 20 meters (66 feet) from impact with culvert



05: Case Vehicle's southeastward travel path in ditch approximately 10 meters (33 feet) from impact with culvert



06: Case Vehicle's southeastward travel path in ditch approximately 5 meters (16 feet) from impact with culvert

On-Site Scene View of Crash Involving a 1996 Chevrolet Cavalier (Case Vehicle)



07: Southeastward view of impacted culvert and Case Vehicle's position at final rest;
NOTE: red/white stakes represent final rest positions of front tires



08: Northeastward view of damaged drainage pipe and debris from Case Vehicle;
NOTE: stake marks left front tire's final rest position



09: Northwest view of Case Vehicle's southeastward path of travel from southeast of point of impact; NOTE: stakes in ditch represent Case vehicle's travel path



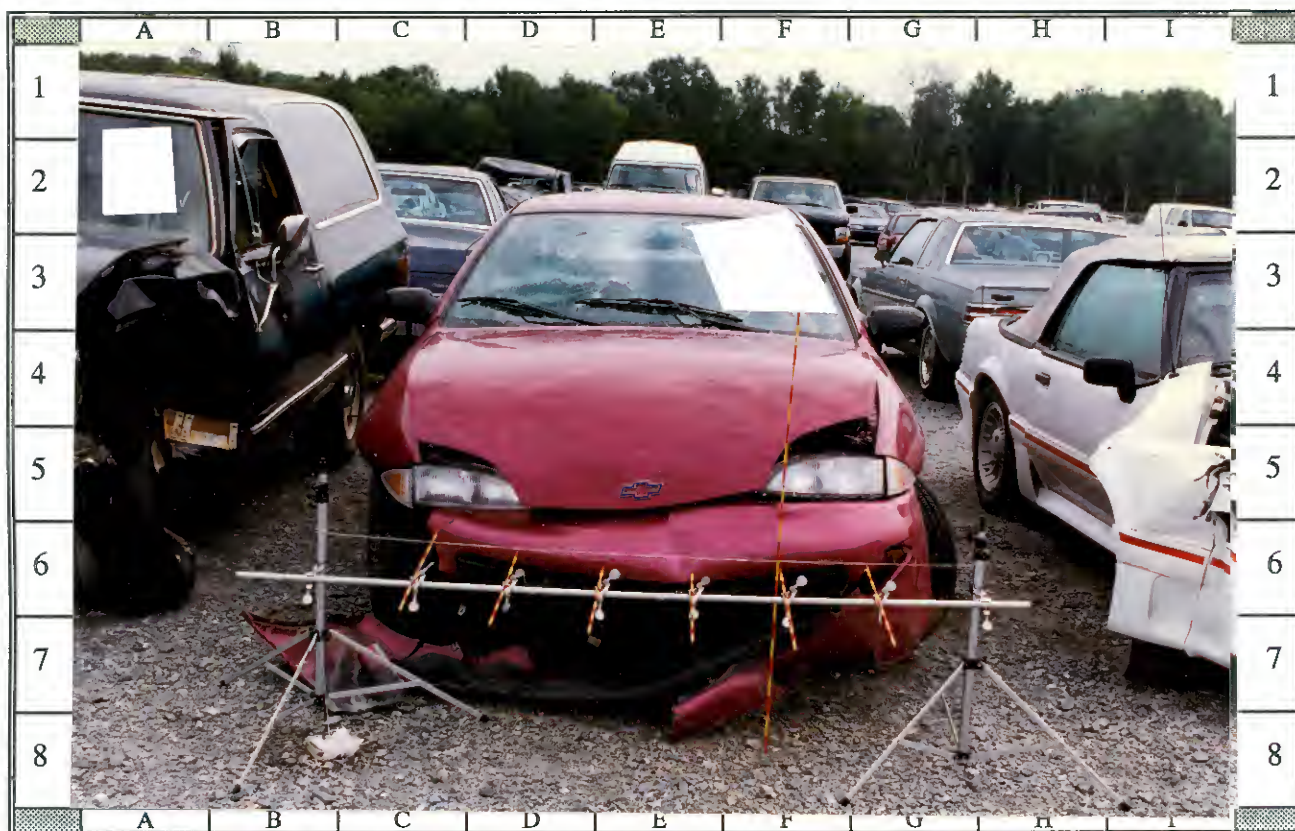
10: Northwest view of Case Vehicle's southeastward travel path from point of roadway departure; NOTE: red/white stake represents right front tire



11: Case Vehicle's damaged front without contour gauge present; NOTE: damage primarily to bumper and below



12: Case Vehicle's damaged front viewed from bumper level without contour gauge; NOTE: extensive damage below bumper



13: Case Vehicle's damaged front with contour gauge present at bumper level



14: Case Vehicle's damaged front viewed from approximately 30 degrees left of front; NOTE: induced damage to hood and left fender

Case Vehicle: 1996 Chevrolet Cavalier, 2-Door Coupe, FWD, 5-Passenger, 2.2 L (133 in³) I-4 MPI



15: Close-up of Case Vehicle's damaged front viewed at bumper level from approximately 45 degrees left of front; NOTE: induced left fender damage near door



16: Close-up of Case Vehicle's damaged left front wheel assembly; NOTE: left front wheel shoved rearward



17: Case Vehicle's undamaged left side (i.e., behind left fender) and back viewed from approximately 45 degrees left of back



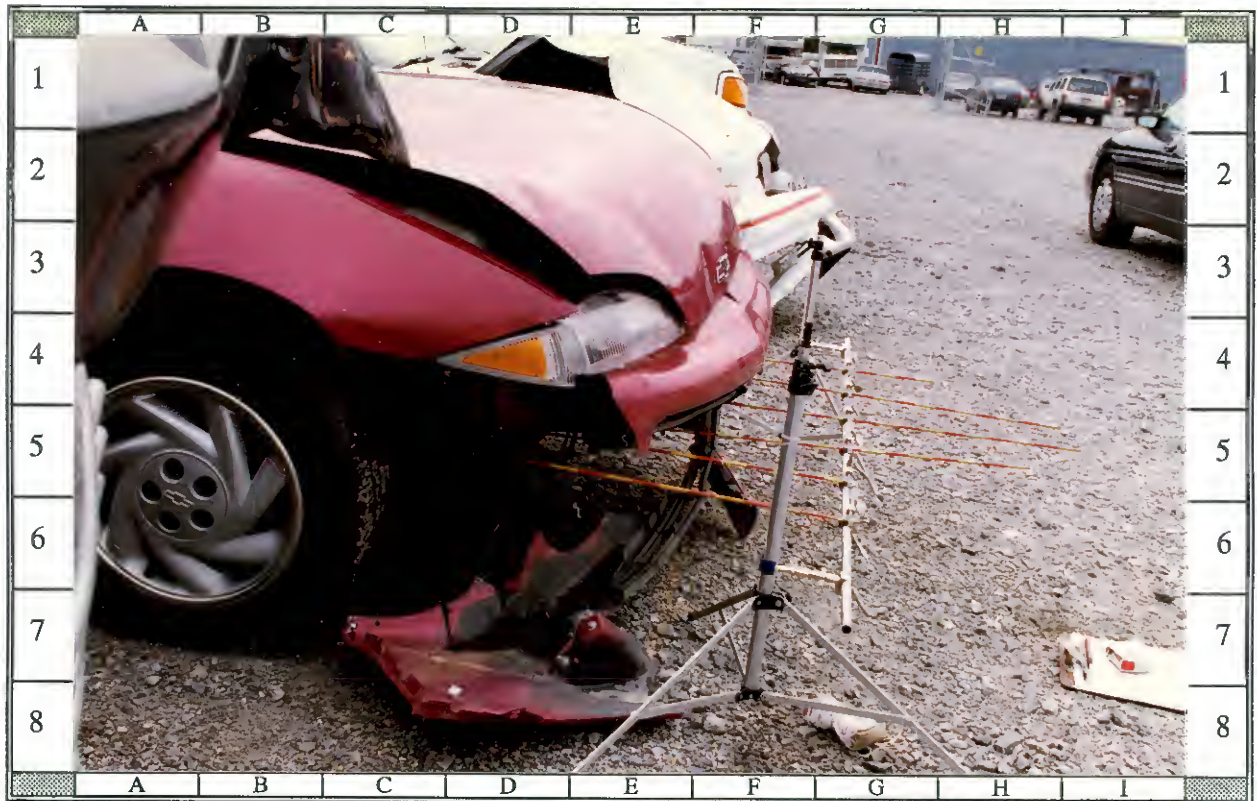
18: Close-up of buckling to Case Vehicle's left roof near "B"-pillar



19: Case Vehicle's undamaged back and right side viewed from approximately 30 degrees right of back



20: Close-up of buckling to Case Vehicle's right roof near "B"-pillar



21: Reference line view of Case Vehicle's damaged front from right; NOTE: contour gauge placed and crush measurements taken below bumper



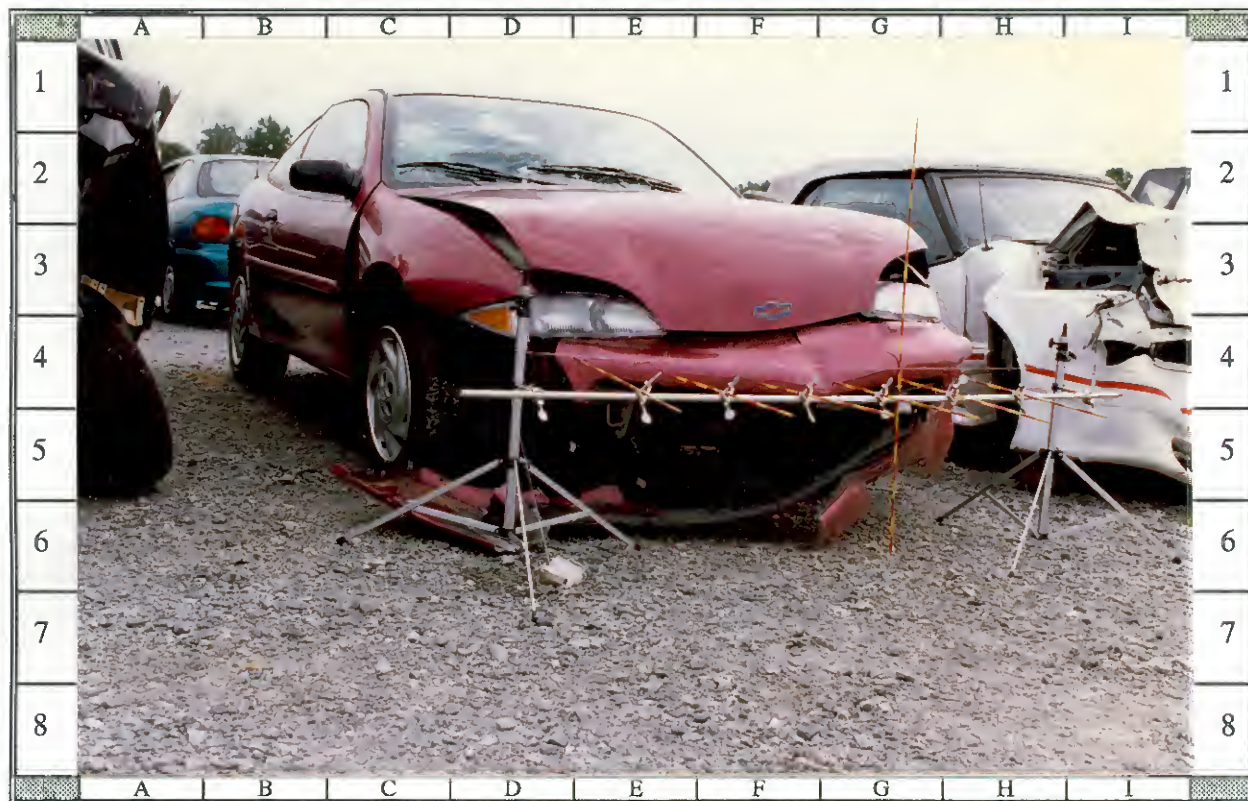
22: Close-up reference line view of Case Vehicle's below bumper crush from right



23: Case Vehicle's damaged front viewed from approximately 30 degrees right of front with contour gauge present at bumper level



24: Close-up of Case Vehicle's damaged right windshield; windshield cracked from right front air bag module's cover flap



25: Case Vehicle's damaged front viewed from approximately 20 degrees right of front showing undercarriage damage below bumper



26: Closer-up view of Case Vehicle's extensive undercarriage damage with contour gauge present below bumper



27: Close-up view of Case Vehicle's undercarriage damage with contour gauge present showing specifically torn radiator from impact with drainage pipe



28: Closer-up view of Case Vehicle's undercarriage damage focusing specifically on torn radiator at C₃ and C₄ crush rods from impact with drainage pipe



29: Interior surface of Case Vehicle's driver door panel and deployed front air bags

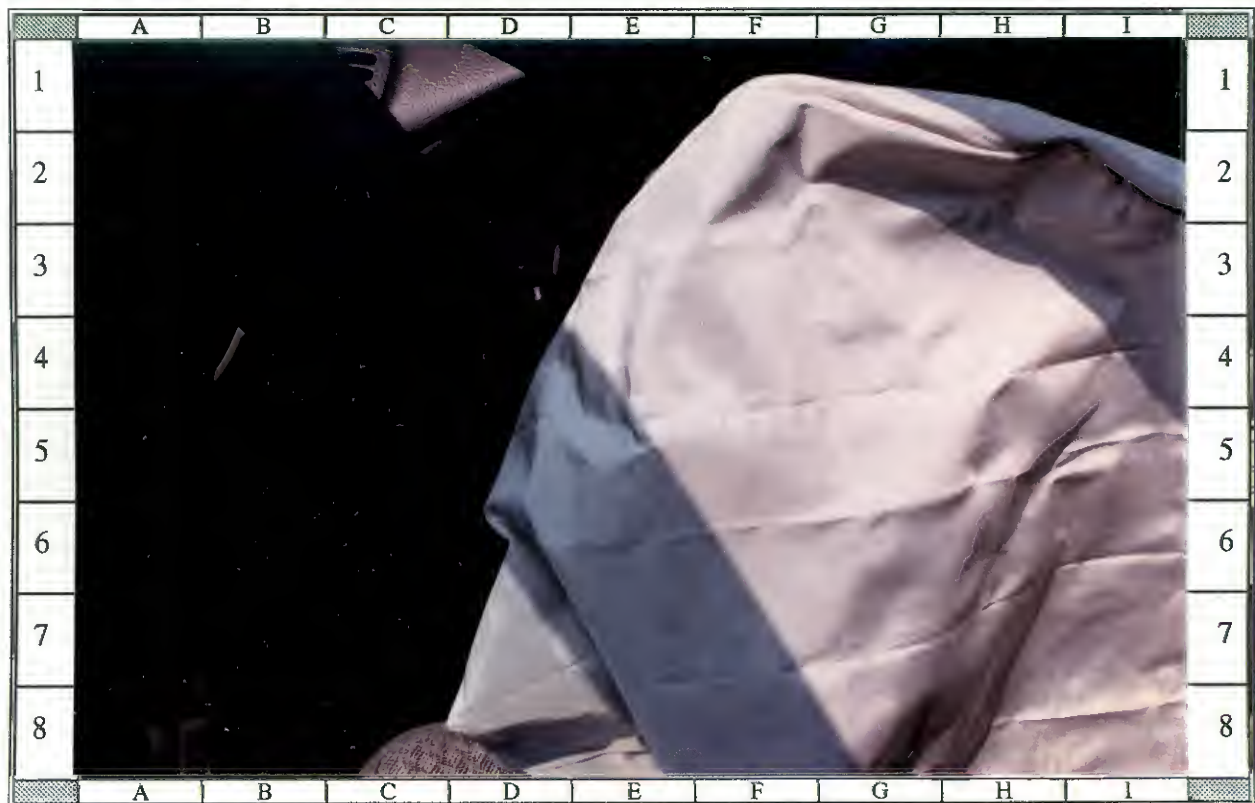


30: Case Vehicle's front seating area showing black vertical striations (cell G3) and contact evidence (i.e., green dot) to driver's air bag

Case Vehicle: 1996 Chevrolet Cavalier, 2-Door Coupe, FWD, 5-Passenger, 2.2 L (133 in³) I-4 MPI



31: Close-up of contact evidence (skin and oil transfers--green dot) to Case Vehicle's driver air bag



32: Black vertical transfer on Case Vehicle's driver air bag from driver side air bag module's cover flap (see Photo #33)



33: Case Vehicle's noncontacted driver side air bag module's cover flaps; NOTE: black vertical transfer marks on air bag near top portion of cover flaps



34: Close-up of Case Vehicle's contacted knee bolster on both sides of steering column



35: Close-up of buckling to Case Vehicle's driver side floor pan



36: Angled close-up through Case Vehicle's damaged windshield showing steering wheel pushed inward toward dash approximately 5 centimeters (2 inches)



37: Panoramic view of Case Vehicle's front seating area showing deployed air bags and damaged glazing



38: Case Vehicle's driver side sunvisor showing contact from driver's head



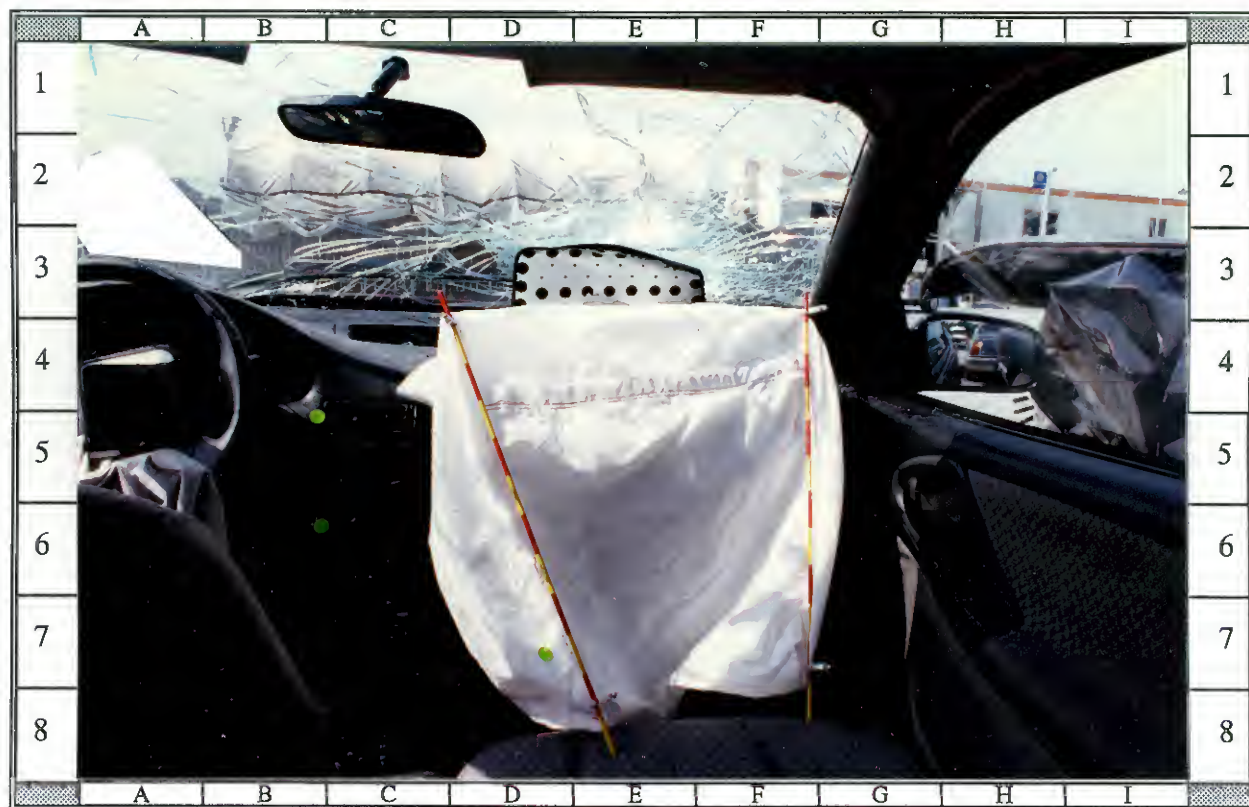
39: Case Vehicle's driver side seatbelt's "D"-ring showing no evidence of loading or usage during crash



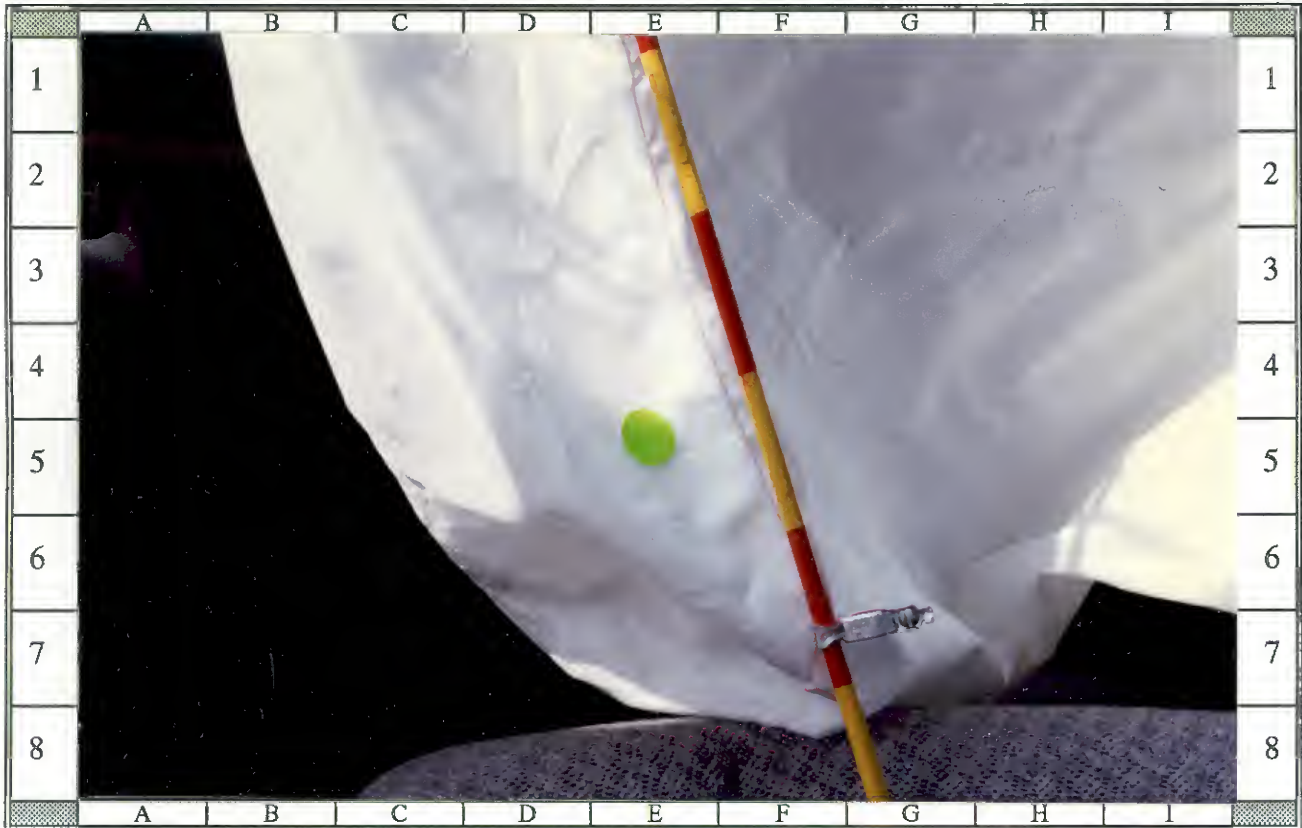
40: Case Vehicle's contacted center console and left edge of right front passenger air bag



41: Close-up of Case Vehicle's contacted center console (i.e., between dots); NOTE: skin transfer (cell E3) is from right front passenger's head



42: Case Vehicle's contacted center console and deployed right front passenger air bag; NOTE: rearview mirror contacted by air bag

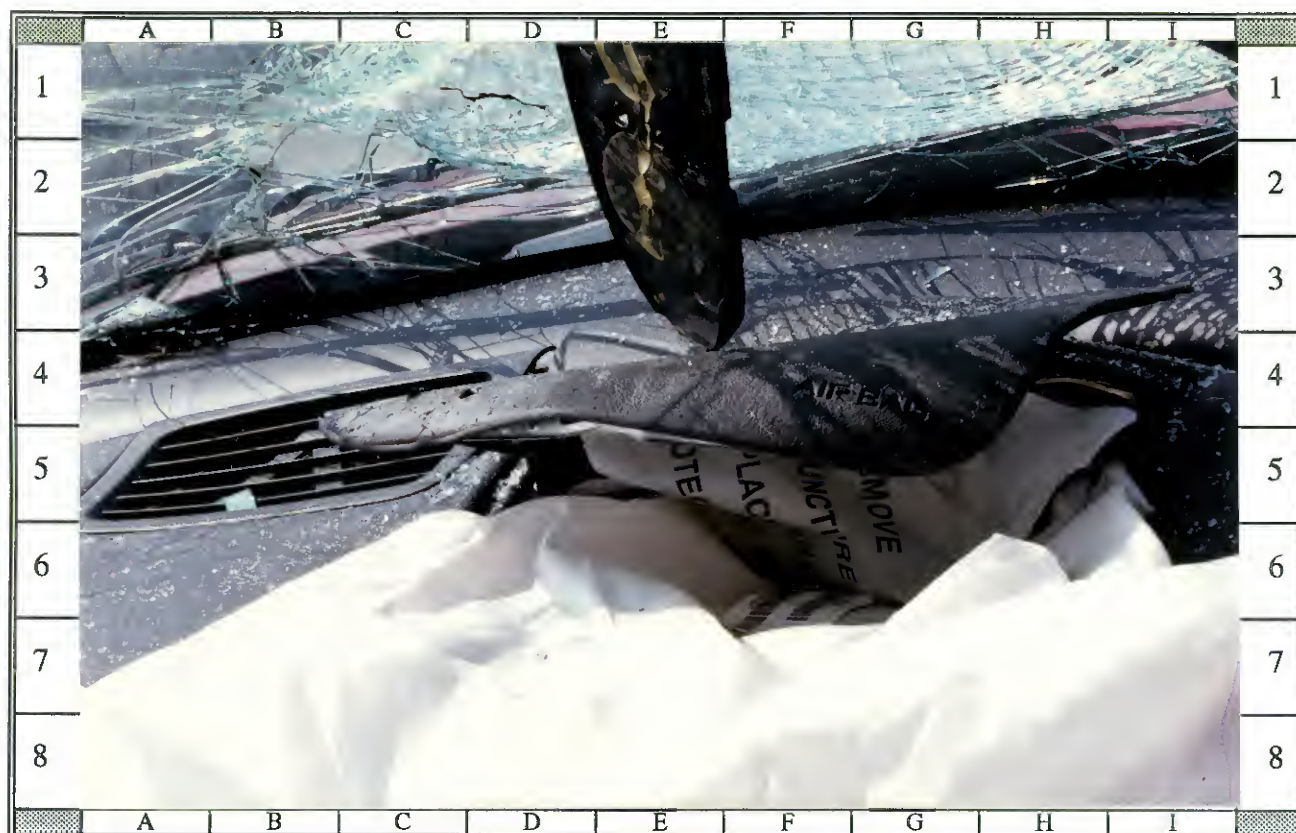


43: Close-up of observed contact area to left lower edge of Case Vehicle's right front passenger air bag



44: Case Vehicle's deployed right front passenger air bag; NOTE: no obvious contact evidence found to front of air bag

Case Vehicle: 1996 Chevrolet Cavalier, 2-Door Coupe, FWD, 5-Passenger, 2.2 L (133 in³) I-4 MPI



45: Case Vehicle's noncontacted but damaged (i.e., from striking windshield) right front air bag module's cover flap; NOTE: plastic piece holds up windshield



46: Case Vehicle's right front glovebox and knee bolster; NOTE: no evidence found of occupant contact

Case Vehicle: 1996 Chevrolet Cavalier, 2-Door Coupe, FWD, 5-Passenger, 2.2 L (133 in³) I-4 MPI



47: Case Vehicle's right front passenger seatbelt showing no visible evidence to outside of webbing (e.g., blood)



48: Case Vehicle's right front passenger seatbelt showing no visible evidence to inside of webbing (e.g., blood)



49: Case Vehicle's right front passenger seat showing dried blood drainage to outward base of cushion



50: Case Vehicle's rear seating area; NOTE: front right seatback reclined and outboard three-point belts and no rear head restraints

TRANSPORTATION RESEARCH CENTER

Indiana University
Bloomington, Indiana 47403-1599

ON-SITE AIR BAG INVESTIGATION

NASS CDS FORMS AND MEDICAL RECORDS

CASE NO. - 96-20
FLEET - PRIVATE VEHICLE
LOCATION -
ACCIDENT DATE - 1996

Submitted By:

Senior Staff Associate
and

Associate Scientist

1997

Revised Submission:

2001

Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590-0003

POLICE ACCIDENT REPORT

DEPARTMENT OF PUBLIC SAFETY, ACCIDENT REPORTING UNIT, P.O. BOX 96

Accident Number		Agency NCIC No.		UNIFORM: MOTOR VEHICLE ACCIDENT REPORT				County		Date Rec. By DPS			
Date		Day Of Week		Time		Off. Arrived		Total Number Of:		Inside City Of:			
5/16		Sun M T W Th F S		17:23		17:28		Vehicles 1 Injuries 1 Fatalities 0					
Road of Occurrence								At Its Intersection				Corrected Report Yes <input type="checkbox"/>	
1 <input type="checkbox"/> Interstate 2 <input checked="" type="checkbox"/> Lowest St. Rt. 3 <input type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St.								With 1 <input type="checkbox"/> Interstate 2 <input type="checkbox"/> Lowest St. Rt. 3 <input type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St.				Suppl. To Original Yes <input type="checkbox"/>	
Not At Its Intersection But 102								Miles 1 <input type="checkbox"/> North 3 <input checked="" type="checkbox"/> East 0 <input type="checkbox"/> Feet 2 <input type="checkbox"/> South 4 <input type="checkbox"/> West					
And Continuing in the Direction Checked Above								1 <input type="checkbox"/> Interstate 2 <input type="checkbox"/> Lowest St. Rt. 3 <input checked="" type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St. 5 <input type="checkbox"/> Co. Line					
The Next Reference Point is													
Driver # 1 Last Name First Middle Address City State Zip DOB						Driver # Last Name First Middle Address City State Zip DOB							
Driver's License No. Class State 17 <input type="checkbox"/> Male <input checked="" type="checkbox"/> Female						Driver's License No. Class State <input type="checkbox"/> Male <input type="checkbox"/> Female							
Posted Speed 55 Insurance Co. Policy No.						Posted Speed Insurance Co. Policy No.							
Year Make Model Telephone No. VIN Vehicle Color						Year Make Model Telephone No. VIN Vehicle Color							
Trailer Tag # State County Year						Trailer Tag # State County Year							
Same as Driver Owner's Last Name First Middle Address City State Zip						Same as Driver Owner's Last Name First Middle Address City State Zip							
Removed By <input type="checkbox"/> Request <input checked="" type="checkbox"/> List						Removed By <input type="checkbox"/> Request <input type="checkbox"/> List							
Alcohol Test Type Results Drug Test Type Results						Alcohol Test Type Results Drug Test Type Results							
Driver Condition Direction of Travel Vision Obscured Contributing Factors						Driver Condition Direction of Travel Vision Obscured Contributing Factors							
Vehicle Condition Vehicle Maneuver Pedestrian Maneuver						Vehicle Condition Vehicle Maneuver Pedestrian Maneuver							
Most Harmful Event 27 Vehicle Class 1 Vehicle Type 1						Most Harmful Event Vehicle Class Vehicle Type							
Traffic Control 7 Device Inoperative? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Traffic Control Device Inoperative? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Injured Taken To Hospital						By: Private Vehicle							
EMS Notified Time EMS Arrival Time Hospital Arrival Time						Photos Taken: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No By:							
Report Date Department Sheriff						Report Date Checked By Date Checked 96							
Witness(es): Name Address City State Zip Code Telephone No.													
DPS MICROFILM NUMBER (DO NOT WRITE IN THIS SPACE)													
COMMERCIAL VEHICLES ONLY													
Carrier Name Vehicle # Address City State Zip						Carrier Name Vehicle # Address City State Zip							
Number of Axles G.V.W.R. Fed. Reportable 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No Cargo Body Type						Number of Axles G.V.W.R. Fed. Reportable 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No Cargo Body Type							
Vehicle Config. I.C.C.M.C. # U.S. D.O.T. # Interstate <input type="checkbox"/> Intrastate <input type="checkbox"/>						Vehicle Config. I.C.C.M.C. # U.S. D.O.T. # Interstate <input type="checkbox"/> Intrastate <input type="checkbox"/>							
C.D.L.? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No C.D.L. Suspended? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No						C.D.L.? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No C.D.L. Suspended? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No							
Vehicle Placarded? Hazardous Materials? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No						Vehicle Placarded? Hazardous Materials? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No							
If YES, Name or 4 Digit Number from Diamond or Box: 1 Digit Number from Bottom of Diamond:						If YES, Name or 4 Digit Number from Diamond or Box: 1 Digit Number from Bottom of Diamond:							

REMARKS

PAGE _____ OF _____

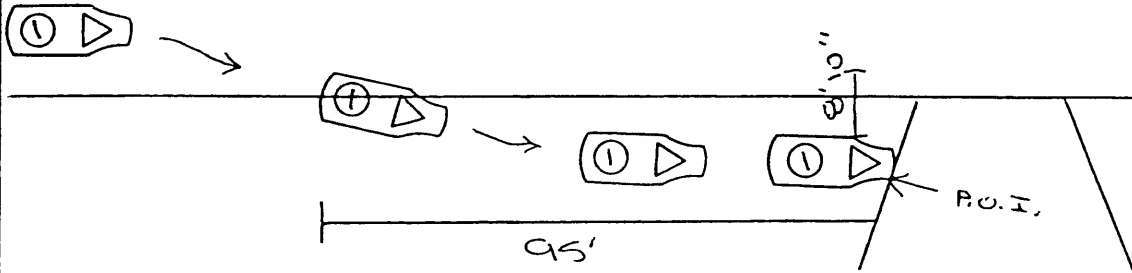
VEHICLE NO. 1 WAS EAST BOUND ON
 LEFT THE ROADWAY, ON THE SOUTH SHOULDER, TRAVELLED
 95 FT. AND STRUCK A CEMENT CULVERT HEAD-ON. VEHICLE
 NO. 1 CAME TO REST ON TOP OF THE CULVERT, EIGHT FEET,
 TEN INCHES FROM THE ROADWAY. DRIVER OF VEHICLE NO. 1 STATED
 THAT THE PASSENGER, A FIVE YEAR OLD CHILD DISTRACTED HER BY
 TRYING TO LAY DOWN IN HER LAP. THE CHILD WAS UN-RESTRAINED
 AND SERIOUSLY INJURED. AFTER ARRIVAL AT HOSP. CHILD WAS
 TRANSFERRED TO (M) SERIOUS HEAD TRAUMA AND LEE INJURIES.
 BLOOD SAMPLE WAS TAKEN FROM DRIVER TO DETERMINE IF D.U.I. IS INVOLVED.

INDICATE ON THIS DIAGRAM WHAT HAPPENED

NOT TO SCALE

INDICATE
NORTH

① ▷ - VEHICLE NO. 1



Accident Investigation Site?

☐ Yes ☐ No

Site Number: _____

CITATIONS - VEHICLE # 1

CITATIONS - VEHICLE # _____

First Harmful Event	Traffic-Way Flow	Weather	Surface Cond.	Light Condition	Manner Of Collision	Location At Area Of Impact	Road Comp.	Road Defects	Road Character
	1	1	1	1	6	3	2	1	1

VEH. # 1	VEH. #	SKID DISTANCE BEFORE IMPACT	AFTER	Width Of Road
Number of Occupants	2	0	0'	28'
Point Of Initial Contact	12	VEH. 1	VEH. 1	
Damage To Vehicles	4	VEH.	VEH.	

Damage Other Than Vehicle: CEMENT CULVERT Owner: STATE OF

AGE	SEX	VEH NO.	POS.	INJURY	TAKEN FOR TREAT.	EJECT	SAFETY EQUIP.	EXTRIC.	AIR BAG
-----	-----	---------	------	--------	------------------	-------	---------------	---------	---------

Occupants

Driver # 1 Or Pedestrian #

Driver # Or Pedestrian #

Last Name	First	Address	City	State	Zip
-----------	-------	---------	------	-------	-----

				0	2	1	8	2	1
--	--	--	--	---	---	---	---	---	---

5	F	1	3	2	1	1	0	2	1
---	---	---	---	---	---	---	---	---	---

DEPARTMENT OF PUBLIC SAFETY, ACCIDENT REPORTING UNIT, P.O. BOX

MAIL TO:

Accident Number		Agency NCIC No.		UNIFORM MOTOR VEHICLE ACCIDENT REPORT				County		Date Rec. By DPS	
Date 96	Day of Week <input type="checkbox"/> Sun <input type="checkbox"/> M <input checked="" type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> Th <input type="checkbox"/> F <input type="checkbox"/> S			Time 17:23	Off. Arrived 17:28	Total Number Of: Vehicles 1 Injuries 0 Fatalities 1			Inside City Of:		
Road of Occurrence 1 <input type="checkbox"/> Interstate 2 <input checked="" type="checkbox"/> Lowest St. Rt. 3 <input type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St.				At Its Intersection With 1 <input type="checkbox"/> Interstate 2 <input type="checkbox"/> Lowest St. Rt. 3 <input type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St.				Corrected Report Yes <input checked="" type="checkbox"/>			
Not At Its Intersection But 102				<input checked="" type="checkbox"/> Miles 1 <input type="checkbox"/> North 3 <input checked="" type="checkbox"/> East <input type="checkbox"/> Feet 2 <input type="checkbox"/> South 4 <input type="checkbox"/> West		Of: 1 <input type="checkbox"/> Interstate 2 <input type="checkbox"/> Lowest St. Rt. 3 <input type="checkbox"/> Co. Road 4 <input checked="" type="checkbox"/> City St. 5 <input type="checkbox"/> Co. Line			Suppl. To Original Yes <input type="checkbox"/>		
And Continuing in the Direction Checked Above The Next Reference Point is 1 <input type="checkbox"/> Interstate 2 <input type="checkbox"/> Lowest St. Rt. 3 <input checked="" type="checkbox"/> Co. Road 4 <input type="checkbox"/> City St. 5 <input type="checkbox"/> Co. Line											

Driver # Last Name First Middle Address Ped <input type="checkbox"/> City State Zip DOB Driver's License No. Class State <input type="checkbox"/> Male <input type="checkbox"/> Female Posted Speed Insurance Co. Policy No. Year Make Model Telephone No. VIN Vehicle Color Tag # State County Year Trailer Tag # State County Year <input type="checkbox"/> Same as Driver Owner's Last Name First Middle Address City State Zip Removed By <input type="checkbox"/> Request <input type="checkbox"/> List	Driver # Last Name First Middle Address Ped <input type="checkbox"/> City State Zip DOB Driver's License No. Class State <input type="checkbox"/> Male <input type="checkbox"/> Female Posted Speed Insurance Co. Policy No. Year Make Model Telephone No. VIN Vehicle Color Tag # State County Year Trailer Tag # State County Year <input type="checkbox"/> Same as Driver Owner's Last Name First Middle Address City State Zip Removed By <input type="checkbox"/> Request <input type="checkbox"/> List
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Alcohol Test Type Results Drug Test Type Results Driver Condition Direction of Travel Vision Obscured Contributing Factors Vehicle Condition Vehicle Maneuver Pedestrian Maneuver Most Harmful Event Vehicle Class Vehicle Type Traffic Control Device Inoperative? <input type="checkbox"/> Yes <input type="checkbox"/> No	Alcohol Test Type Results Drug Test Type Results Driver Condition Direction of Travel Vision Obscured Contributing Factors Vehicle Condition Vehicle Maneuver Pedestrian Maneuver Most Harmful Event Vehicle Class Vehicle Type Traffic Control Device Inoperative? <input type="checkbox"/> Yes <input type="checkbox"/> No
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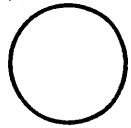
Injured Taken To				By:			
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Report By: Department				Report Date		Checked By: Date Checked 96	
Witness(es): Name		Address		City		State Zip Code Telephone No.	
DPS MICROFILM NUMBER (DO NOT WRITE IN THIS SPACE)							

COMMERCIAL VEHICLES ONLY							
Carrier Name Vehicle #				Carrier Name Vehicle #			
Address				Address			
City State Zip				City State Zip			
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Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No		Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No		Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No		Released? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
If YES, Name or 4 Digit Number from Diamond or Box: 1 Digit Number from Bottom of Diamond:				If YES, Name or 4 Digit Number from Diamond or Box: 1 Digit Number from Bottom of Diamond:			

REMARKS

PAGE _____ OF _____

INDICATE ON THIS DIAGRAM WHAT HAPPENED

INDICATE
NORTH

Accident Investigation Site?

☐ Yes ☐ No

Site Number: _____

CITATIONS - VEHICLE # _____

CITATIONS - VEHICLE # _____

First Harmful Event	Traffic-Way Flow	Weather	Surface Cond.	Light Condition	Manner Of Collision	Location At Area Of Impact	Road Comp.	Road Defects	Road Character
---------------------	------------------	---------	---------------	-----------------	---------------------	----------------------------	------------	--------------	----------------

VEH. # _____ VEH. # _____

Number of Occupants

Point Of Initial Contact

Damage To Vehicles

SKID DISTANCE
BEFORE IMPACT

VEH.

VEH.

AFTER

VEH.

VEH.

Width Of Road

Damage Other Than Vehicle:

Owner:

AGE	SEX	VEH NO.	POS.	INJURY	TAKEN FOR TREAT.	EJECT	SAFETY EQUIP.	EXTRIC.	AIR BAG
-----	-----	---------	------	--------	------------------	-------	---------------	---------	---------

Occupants

Driver # Or Pedestrian #

Driver # Or Pedestrian #

Last Name	First	Address	City	State	Zip
-----------	-------	---------	------	-------	-----

S F 1 3 1 1 1 0 2 1

ORIGINAL ☐SUPPLEMENTAL ☒

96

Accident With Injury

96

@ 5:23 P.M.

DRIVER:

(NOT INJURED)

PASSENGER:

(SEVERE HEAD TRAUMA)

(possibly both legs broken)

AROUND 6:30 P.M. ON 96, I WAS CALLED AT home by Sheriff and ASKED TO ASSIST CAPT. AT THE EMERGENCY ROOM OF THE LOCAL hospital.

I WAS TOLD THAT THERE HAD BEEN AN ACCIDENT ON Hwy just outside the limits of It WAS BELIEVED IT WAS A 2 CAR ACCIDENT AND ONE CAR HAD FLED THE SCENE AND A CHILD HAD BEEN RUN OVER.

Lt. WAS AT MY RESIDENCE WHEN I WAS CONTACTED BY Sheriff. Shortly AFTER MY CONVERSATION WITH Sheriff HE PAGED Lt.

Lt. CALLED Sheriff AND WAS GIVEN THE SAME INSTRUCTIONS AS HE HAD JUST GIVEN ME SO WE BOTH WENT TO THE E.R. TOGETHER.

WHEN WE ARRIVED AT THE E.R. WE WERE MET BY Capt. HE EXPLAINED THAT WAS DRIVING EAST ON Hwy HER NIECE, WHOM SHE HAS GUARDIANSHIP OF, WAS A PASSENGER WITH

Capt. SAID TOLD HIM THAT WANTED TO LAY DOWN IN CAP AND WAS TOLD SHE COULDN'T AND TO SIT UP. SOMEHOW, DURING THIS EXCHANGE, LOST CONTROL OF THE VEHICLE, RAN OFF THE ROAD AND STRUCK A 24" CONCRETE CULVERT. THE CAR WAS A TOTAL LOSS. BOTH AIR BAGS DEPLOYED. THE DRIVER WAS UNINJURED DUE TO HER AIR BAG. THE CHILD, WHO WAS NOT RESTRAINED, WAS SEVERELY INJURED. THEY WERE BOTH BROUGHT TO THE E.R. BY A YET UNIDENTIFIED PASSERBY. IT IS BELIEVED THAT THIS IS WHERE THE RUMOR STARTED ABOUT A SECOND VEHICLE THAT FLED THE SCENE. ACTUALLY, THE SO CALLED SECOND VEHICLE, WAS RUSHING THE ACCIDENT VICTIMS TO THE HOSPITAL.

ORIGINAL ☐SUPPLEMENTAL ☐

BEST AVAILABLE

signs of cuts, scratches or abrasions except a couple of small scratches on the outer left leg near the ankle area. I was unable to see any type injury that would indicate the child had been run over.

There was a slight depression on the upper left forehead. I was told the child's skull was fractured. There were no cuts or abrasions associated with this area of injury. There was a small trickle of blood from both nostrils. This was apparently due to the severe head injury.

Trooper [redacted] from [redacted] arrived. He had been called by Capt. [redacted] also. I briefed Tpr. [redacted] on what I knew. He viewed the physical condition of the child and agreed there was no evidence to support the theory the child had been run over. He agreed too that the head injury appeared to be blunt force trauma.

Tpr. [redacted] Cpl. [redacted] Lt. [redacted] and I went to view the accident scene. It appeared as though the vehicle veered off the roadway on the passenger side, travelled approx 95' down the ditch and struck head on a 24" culvert under a driveway. The culvert brought the car to a dead stop. There was no sign the driver ever applied brakes.

There were additional tracks on the other side of the drive. These tracks are attributed to the vehicle that took the accident victims to the E.R.

We all then rode to [redacted] to [redacted] Auto-motive/WRECKER Shop. [redacted] is the wrecker service that towed the vehicle in. The motor, transmission, drive shaft and other parts of the car were knocked loose. The impact was so great that it crimped the roof of the car just behind the door posts on both car doors. The windshield on the passenger side was shattered. When the passenger side air bag deployed, the door that secured the bag flew up and shattered the windshield. There was no damage done to the instrument panel on the dash, or steering wheel or steering

ORIGINAL

SUPPLEMENTAL

It is not known exactly what caused the trauma to the child's head. After carefully inspecting the interior of the vehicle thoroughly, we decided that the only object in the interior that could have caused the injury was the console. It is slightly rounded and padded. This would account for there being no contusion around the head wound. We believe that if the child was beginning to sit up at the time of impact, then when the bag deployed, the force of the bag drove her down hard onto the console cover.

This was the conclusion that Tpr. Cpl.

Lt.

and I all agreed on.

Capt.

Report should be more

detailed concerning the driver's remarks because he interviewed her.

STATE OF
BUREAU OF INVESTIGATION
DIVISION OF FORENSIC SCIENCES
OFFICIAL REPORT

PAGE 1 OF 1

CASE NUMBER

DATE

1996

VICTIM:

SUSPECT:

OFFICERS:

AGENCY:

COUNTY:

CPL.

SHERIFF'S OFFICE
SOL. STATE COURT

DESCRIPTION:

ON 1996 AT 11:50 THE FOLLOWING EVIDENCE
WAS RECEIVED FROM LT.

HEAT-SEALED PLASTIC BAG CONTAINING TWO GLASS TEST TUBES WITH GRAY
RUBBER STOPPERS LABELED BOTH CONTAINING BLOOD

SERVICE REQUESTED:

BA BLOOD ALCOHOL PERFORMED BY

RESULTS:

THE BLOOD IS NEGATIVE FOR ETHYL ALCOHOL.
ANALYSIS PERFORMED BY GAS CHROMATOGRAPHY.

CD CHECK FOR DRUGS

RESULTS:

THE BLOOD SPECIMEN IS NEGATIVE FOR A DETECTABLE QUANTITY OF
BARBITURATES, CERTAIN BENZODIAZEPINES, COCAINE AND/OR METABOLITES,
COMMON OPIOIDS, AMPHETAMINES, AND CANNABINOIDS (MARIJUANA).
(IMMUNOASSAY TEST(S)) (KLD)

RESPECTFULLY SUBMITTED,

B.S.
Forensic Toxicologist

SELECTED NASS CDS VEHICLE FORMS: CASE VEHICLE



EXTERIOR VEHICLE FORM

1. Primary Sampling Unit Number

10

3. Vehicle Number

01

2. Case Number - Stratum

9620

VEHICLE IDENTIFICATION

VIN 1G1JC1240T7

Model Year 96

Vehicle Make (specify):

Chevrolet

Vehicle Model (specify):

CAVALIER

LOCATOR

Locate the end of the damage with respect to the vehicle's damaged center point or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Max Crush
<u>01</u>	<u>BC to BC bumper</u>	<u>ACROSS front Bumper</u>	<u>C-4</u>
	<u>and below</u>		

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

Specific Impact Number	Plane of Impact C-Measurements	Direct Damage		Field L	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	±D
		Width (CDC)	Max Crush								
<u>01</u>	<u>@ Bumper</u>	<u>114</u>	<u>19</u>	<u>114</u>	<u>18</u>	<u>15</u>	<u>19</u>	<u>17</u>	<u>20</u>	<u>31</u>	
	<u>FREE</u>		<u>3</u>		<u>26</u>	<u>16</u>	<u>3</u>	<u>3</u>	<u>16</u>	<u>26</u>	
	<u>ADJ</u>		<u>16</u>		<u>0</u>	<u>0</u>	<u>16</u>	<u>14</u>	<u>4</u>	<u>5</u>	
<u>01</u>	<u>Below Bumper</u>	<u>114</u>	<u>71</u>	<u>114</u>	<u>39</u>	<u>54</u>	<u>59</u>	<u>71</u>	<u>48</u>	<u>47</u>	
	<u>FREE</u>		<u>31</u>		<u>31</u>	<u>31</u>	<u>31</u>	<u>31</u>	<u>31</u>	<u>31</u>	
	<u>ADJ</u>		<u>40</u>		<u>8</u>	<u>23</u>	<u>28</u>	<u>40</u>	<u>17</u>	<u>16</u>	
	<u>FINAL AVG</u>	<u>114</u>	<u>28</u>	<u>114</u>	<u>0</u>	<u>11.5</u>	<u>16</u>	<u>27</u>	<u>10.5</u>	<u>5</u>	

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase 104.1 inches x 2.54 = 264.4 cm
 Overall Length 180.3 inches x 2.54 = 458.0 cm
 Maximum Width 67.4 inches x 2.54 = 171.2 cm
 Curb Weight 2,753 pounds x 0.4536 = 1,248.8 kg
 Average Track 57.6 inches x 2.54 = 145.2 cm
 56.7 57.15
 Front Overhang inches x 2.54 = 99 cm
 Rear Overhang inches x 2.54 = 96 cm
 Undeformed End Width inches x 2.54 = 132 cm
 Engine Size: cyl/disl. cc x 0.001 = 2.2 L
 I4, 5 passengers 133 CID x 0.0164 = 2.2 L
 2-door coupe, 3-speed Automatic

Shipping weight
5-speed manual

3-speed automatic

Curb weight
5-Speed manual

2,498
100
 2,598
 2,634
100
 2,734
 2,617

Auto Transmission
 136 lbs
 2,617
 +136
2,753

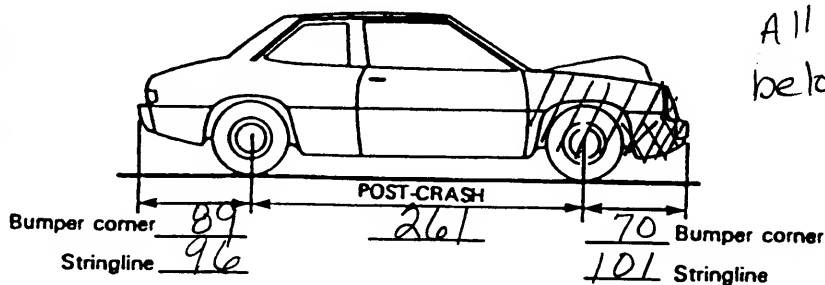
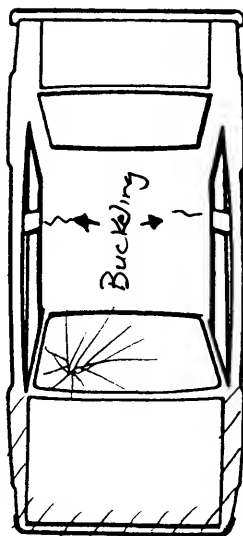
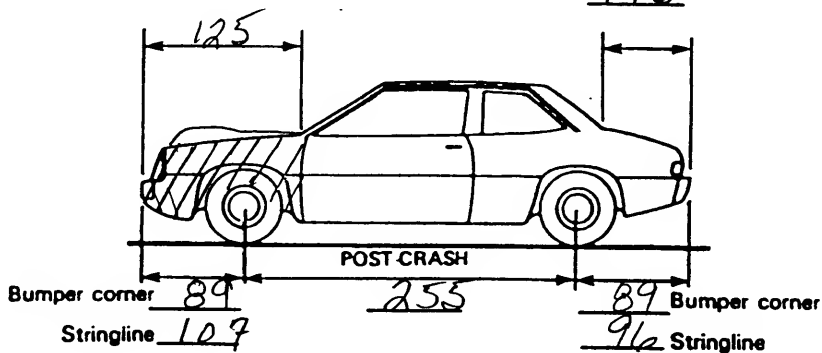
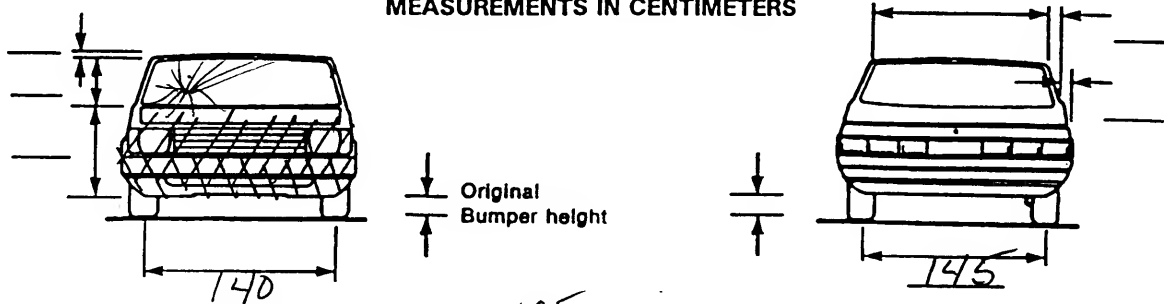
SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify}		Color: {specify}	Repair Cost: \$
Transmission: {circle}	Automatic	Manual	Speed: {circle} 3-speed 4-speed 5-speed Other:
Steering: {circle}	Power-assisted	Manual	Type: rack-and-pinion worm-and-gear Other
{please describe}:			
Brakes: {circle}	Power-assisted	Manual	Type: 4-wheel disc 4-wheel drum 4-wheel hydraulic front disc, rear drum Other:
Observed Defects: {specify}			
Fleet Type: {circle}	Private vehicle	Rental vehicle	Leased vehicle Commercial vehicle Other
{please describe}:			

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF <u>1</u> LF <u>1</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		b. Tire deflated RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u>		ORIGINAL SPECIFICATIONS Wheelbase <u>264</u> cm Overall Length <u>458</u> cm Maximum Width <u>171</u> cm Curb Weight <u>1,249</u> kg Average Track <u>145</u> cm Front Overhang <u>99</u> cm Rear Overhang <u>96</u> cm Undeformed End Width <u>132</u> cm Engine Size: cyl./displ. <u>4, 2.2</u> L		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR ± _____ ° LR ± _____ ° Within ± 5 degrees	
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic END SHIFT ≥ 10 CM <input type="checkbox"/> Yes <input type="checkbox"/> No				DRIVE WHEELS <input type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD			
				Approximate Cargo Weight _____ kg			

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

W.S.
CRACKED
FROM AB
FLAP COVER

All Direct to
below Bumper

BRANHAM AUTOMOBILE REFERENCE BOOK-PASSENGER CAR SECTION

CHEVROLET Division, General Motors Corp.

Type of Body Pass. Cap.		Model	Wheel Base	Dimensions Inches Lt. x Wt. x Ht.		Ship. Wt.	Tax H.P.	Factory List Price	Factory Def'd Price
1996 Caprice Classic RWD V8 cyl 5.7 liter SFI Gas Engine(LT1)(16 valve)									
Bore & Stroke 4.0x3.48; Tax H.P. 51.2; SAE H.P. 260@5000; Torque 330@2400; 350 cu.in., 5.7 liter (Sedan)									
Bore & Stroke 4.0x3.48; Tax H.P. 51.2; SAE H.P. 260@4800; Torque 330@2400; 350 cu.in., 5.7 liter (Wagon)									
Auto. Trans. 4-speed; EPA Mileage Estimate 17/25									
6-PS 4-dr NB Sedan		1BL19	115.9"	214.1"	77.5" x 55.7"	3959	51.2	20,455	21,045
Police Vehicle		1BL19/9C1	115.9"	214.5"	77.5" x 55.7"	4100	51.2		
8-PS 4-dr Wagon 3-seats		1BL35	115.9"	217.3"	79.6" x 60.9"	4357	51.2	22,405	22,995
Options Caprice Series: Destination Charges-\$590; 5.7 liter V8 EFI Gas Engine(LT1) Sedan-\$550; Preferred Equip. Group Wagon (1)-\$948 (2)-\$1821; Limited Slip Differential Sedan-\$250 Wagon-\$100; Leather Seats(AM6)-\$775; Suspension (Sport)(B4U)-\$508; Wheel (Aluminum w/Locks)-\$250 (Deluxe Covers)-\$215; Woodgrain Exterior-\$595									
1996 Cavalier Series FWD L4 cyl 2.2 liter OHV SFI Gas Engine(LN2)(8 valve)									
Bore & Stroke 3.5x3.46; Tax H.P. 19.6; SAE H.P. 120@5200; Torque 130@4000; 133 cu.in., 2.2 liter									
Man. Trans. 5-speed(MK7); EPA Mileage Estimate 25/34									
5-PS 2-dr NB Coupe		1JC37/1SA	104.1"	180.3"	68.7" x 53.2"	2498	19.6	10,500	10,995
5-PS 4-dr NB Sedan		1JC69/1SE	104.1"	180.3"	67.9" x 54.9"	2553	19.6	10,700	11,195
4-PS 2-dr Convertible LS		1JF67	104.1"	180.3"	68.7" x 53.9"	2825	19.6	16,705	17,200
Auto. Trans. 3-speed(MD9); EPA Mileage Estimate 25/34 (Wagon) 25/31									
5-PS 2-dr NB Coupe		1JF37	104.1"	180.3"	68.7" x 53.2"	2634	19.6	11,050	11,545
5-PS 4-dr NB Sedan		1JC69	104.1"	180.3"	67.9" x 54.9"	2553	19.6	11,250	11,745
Auto. Trans. 4-speed(MN4); EPA Mileage Estimate									
5-PS 4-dr NB Sedan LS		1JF69/1SH	104.1"	180.3"	67.9" x 54.9"	2655	19.6	12,900	13,395
4-PS 2-dr Convertible LS		1JF67/1SP	104.1"	180.3"	68.7" x 53.9"	2825	19.6	17,500	17,995
1996 Cavalier Series FWD 4 cyl 2.4 liter DOHC SFI Gas Engine(LD9)(16 valve)									
Bore & Stroke 3.54"x3.7"; Tax H.P. 20.05; SAE H.P. 150@5200; Torque 150@4400; 146 cu.in., 2.4 liter									
Man. Trans. 5-speed(MJ1); EPA Mileage Estimate 23/33									
5-PS 2-dr NB Coupe Z24		1JF37/1SL	104.1"	180.3"	68.7" x 53.2"	2741	20.05	14,200	14,695
4-PS 2-dr Convertible LS		1JF67	104.1"	180.3"	68.7" x 53.9"	2932	20.05	17,100	17,595
Auto. Trans. 4-speed(MN4); EPA Mileage Estimate									
5-PS 2-dr NB Coupe Z24		1JF37	104.1"	180.3"	68.7" x 53.2"	2774	20.05	14,995	15,490
5-PS 4-dr NB Sedan LS		1JF69	104.1"	180.3"	67.9" x 54.9"	2795	20.05	13,295	13,790
4-PS 2-dr Convertible LS		1JF67	104.1"	180.3"	68.7" x 53.9"	2965	20.05	17,895	18,390
Options Cavalier Series: Destination Charges-\$495; 4 cyl 2.3 liter PFI OHV Gas Engine(LD9) LS-\$395 Z24-std; Auto. Trans. 3-speed-\$550 Z24-std; Auto. Trans. 4-speed-\$795; Preferred Equip. Groups Base Coupe (1SA)-std (1SB)-\$240 (1SC)-\$696 (1SD)-\$1295 Sedan (1SE)-std (1SF)-\$223 (1SG)-\$593 LS Sedan(1SH)-std (1SJ)-\$435 (1SK)-\$1225 Z24 Coupe (1SL)-std (1SM)-\$290 (1SN)-\$975 Convertible (1SP)-std (1SQ)-\$435 (1SR)-\$1120; Air Conditioning(C60)-\$795 LS-std Z24-std; Appearance Pkg(W27)-\$255; Electric Rear Window Defogger(C49)-\$170; Door Locks Power(AU3) Sedan-\$250 Coupe-\$210; Emissions (Calif & Mass)-\$100; Sun Roof Coupe-\$670; Wheels (15" Alm) LS-\$295									
1996 Corsica Series FWD L4 cyl 2.2 liter MPFI OHV Gas Engine(LN2)(8 valve)									
Bore & Stroke 3.5"x3.46"; Tax H.P. 19.6; SAE H.P. 120@5200; Torque 130@4000; 134 cu.in., 2.2 liter									
Auto. Trans. 3-speed(MX1); EPA Mileage Estimate 24/31									
5-PS 4-dr NB Sedan		1LD69/1SA	103.4"	183.5"	68.5" x 54.2"	2672	19.6	14,385	14,885
5-PS 4-dr NB Sedan		1LD69/1SP	103.4"	183.5"	68.5" x 54.2"	2672	19.6	13,495	13,995
5-PS 4-dr NB Sedan		1LD69/1SQ	103.4"	183.5"	68.5" x 54.2"	2672	19.6	14,495	14,995
1996 Corsica Series FWD V6 cyl 3.1 liter SPFI OHV Gas Engine(L82)(12 valve)									
Bore & Stroke 3.504"x3.307"; Tax H.P. 29.47; SAE H.P. 155@5200; Torque 185@4000; 191 cu.in., 3.1 liter									
Auto. Trans. 4-speed(M13); EPA Mileage Estimate 21/29									
5-PS 4-dr NB Sedan		1LD69	103.4"	183.5"	68.5" x 54.2"	2812	29.47	15,115	15,615
Options Corsica Series: Destination Charges-\$500; V6 3.1 liter SFI Gas Engine(L82)-\$720; Preferred Equip. Group (1SA)-std (1SB)-\$165 (1SC)-\$745 (1LD69)(1SP)-\$1225 (1LD69)(1SQ)-\$1230; Electric Rear Window Defogger(C49)-\$170; Emission (Calif & Mass) (LN2 Engine)-\$100; Wheel (14" Styled Steel)-\$56; Power Windows(A31)-\$340									
1996 Corvette Series RWD V8 cyl 5.7 liter SFI Gas Engine(LT1)(16 valve)									
Bore & Stroke 4.0x3.48; Tax H.P. 51.2; SAE H.P. 300@5000; Torque 340@4000; 350 cu.in., 5.7 liter									
Auto. Trans. 4-speed(M30); EPA Mileage Estimate 17/24									
2-PS 2-dr Coupe		1YY07	96.2"	178.5"	70.7" x 46.3"	3201	51.2	37,225	37,790
2-PS 2-dr Convertible		1YY67	96.2"	178.5"	70.7" x 47.3"	3260	51.2	45,060	45,625
1996 Corvette Series RWD V8 cyl 5.7 liter SFI Gas Engine(LT4)(16 valve)									
Bore & Stroke 4.0x3.48; Tax H.P. 51.2; SAE H.P. 330@5800; Torque 340@4500; 350 cu.in., 5.7 liter									
Man. Trans. 6-speed(ML9); EPA Mileage Estimate 17/25									
2-PS 2-dr Coupe ZR-1		1YZ07	96.2"	178.5"	70.7" x 46.3"	3201	51.2		
2-PS 2-dr Convertible ZR-1		1YY67	96.2"	178.5"	70.7" x 47.3"	3260	51.2		
Options Corvette Series: Destination Charges-\$565; V8 cyl 5.7 liter SFI Gas Engine(LT4)-\$1450; Preferred Equip. Pkg (1SA)-std (1SB)-\$1333 (1SC)-std (1SD)-\$1333; Collectors Edition(Z15)-\$1250; Grand Sport(reg LT4 engine)(Z16) Coupe-\$3250 Convertible-\$2880; Performance Handling Pkg(Z51)-\$350; Hard Tops (Convertible)(CC2)-\$1996; Performance Handling Pkg(Z07)-\$2045; Roof Pkg(C2L)-\$950; Roof Panel (Removable Blue or Bronze Tint									

COLLISION DEFORMATION CLASSIFICATION**HIGHEST DELTA "V"**

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>60</u>	6. <u>12</u>	7. <u>F</u>	8. <u>D</u>	9. <u>L</u>	10. <u>W</u>	11. <u>02</u>

Second Highest Delta "V"

12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18. _____ 19. _____

CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. L 21. C₁ C₂ C₃ C₄ C₅ C₆ 22. ±D

_____ + _____
_____ - _____

Second Highest Delta "V"

23. L 24. C₁ C₂ C₃ C₄ C₅ C₆ 25. ±D

_____ + _____
_____ - _____

26. Undeformed End Width
(Coded when highest severity impact is an end plane impact.) 132
_____ Code to the nearest centimeter
(250) 250 centimeters or more
(998) No highest severity end plane impact
(999) Unknown

27. Direct Damage Width
(For highest severity impact) 114
_____ Code to the nearest centimeter
(250) 250 centimeters or more
(999) Unknown

28. Original Wheelbase 264
_____ Code to the nearest centimeter
(650) 650 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

29. Original Average Track Width 145
_____ Code to the nearest centimeter
(185) 185 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE		-	DAMAGE VALUE	=	DEFORMATION
TOP	DASH to INSIDERIM	10	-	5	= 5
Bottom			-		=
(L)	SIDE (vent)	18	-	10	= 8
(R)	" Lighter to FRONT	17	-	14	= 3

* note: Deformation most likely from shear Capsule movement not Driver contact.

Hub to center of DRIVER seatback 50cm

DRIVER seat track full forward

DR seatback slightly reclined.

DASH to seatback 75cm

PASS seatback 3/4 reclined.

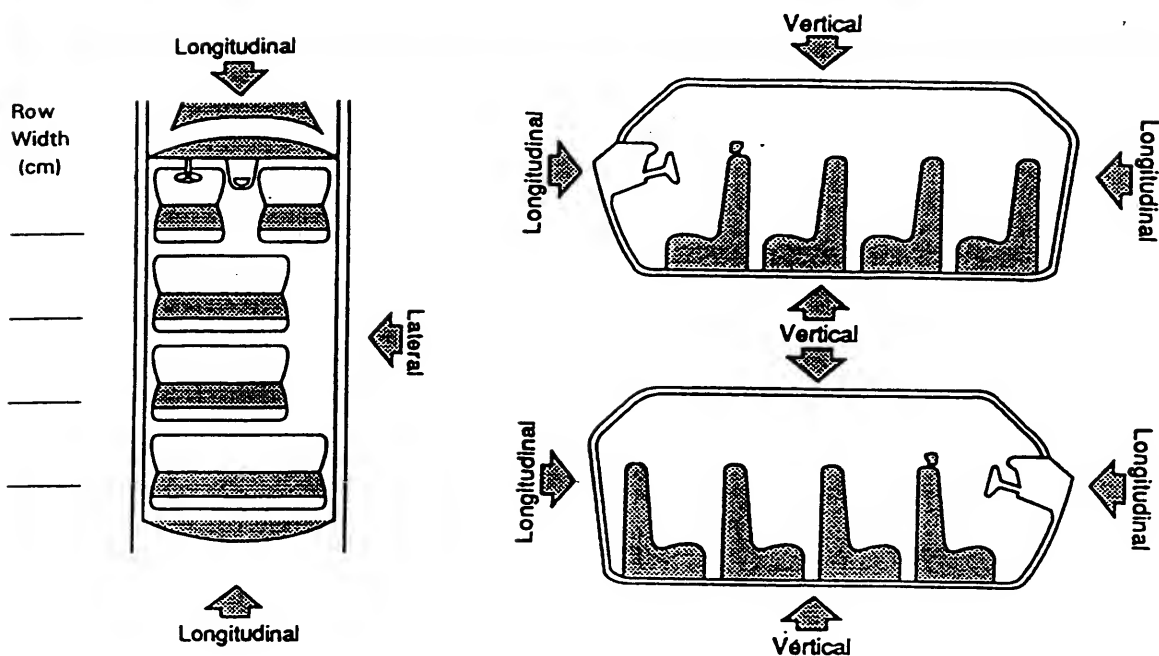
PASS seat track between full forward & MID forward
90% forward

DASH to cover flap 12cm

seat cushion to TOE PAN (BASE) 44cm

INTRUSION WORKSHEET

NOTE: SKETCH INTRUDED AREAS

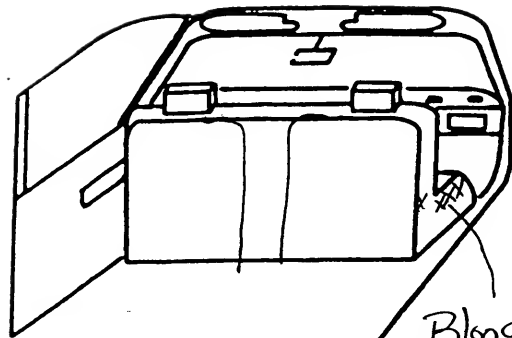
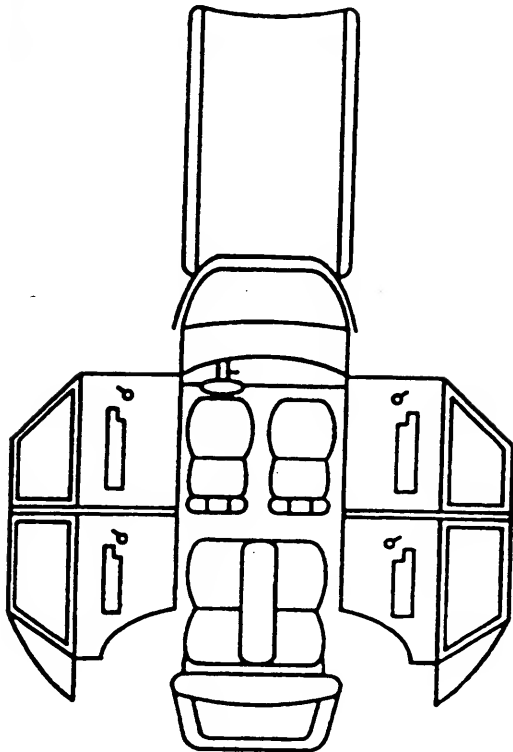
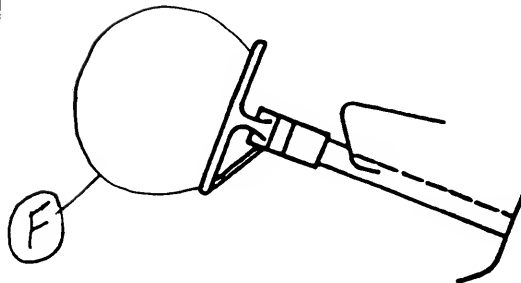
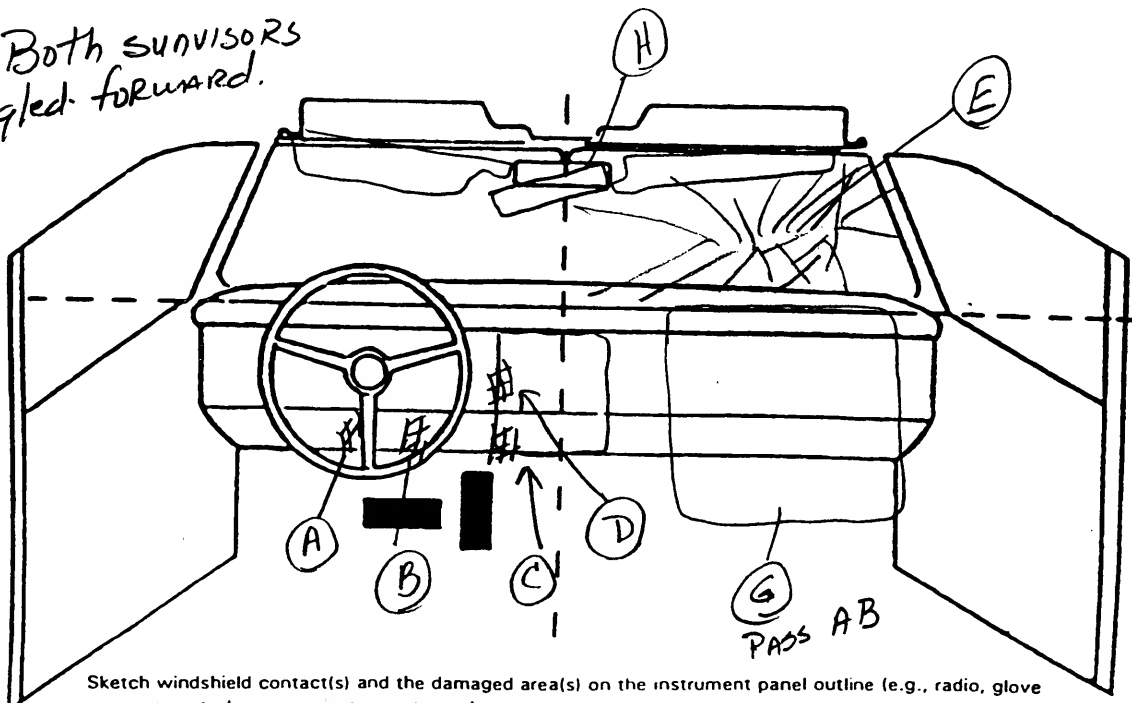


LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters)			DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	INTRUDED VALUE	INTRUSION	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	
		-		=	

Document no more than the 15 most severe intrusions

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment

Blood drops
Along side of
seat.Both survivors
Angled forward.

Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	010	1	(L) KNEE		1
B	010	1	(R) KNEE		1
C	011	2	HEAD	SKIN transfer	1
D	011	2	FACE	" "	1
E	001			NON CONTACT AIRbag COVER FLAP N/A	
F	170	1	FACE	SKIN / MUCOUS	1
G	180	2	Legs TOES	DIRT DARK SKIN	1
H	002			NON CONTACT	N/A
I					
J					
K					
L					
M					
N					

FRONT

- (001) Windshield
 (002) Mirror
 (003) Sunvisor
 (004) Steering wheel rim
 (005) Steering wheel hub/spoke
 (006) Steering wheel (combination of codes 004 and 005)
 (007) Steering column, transmission selector lever, other attachment
 (008) Cellular telephone or CB radio
 (009) Add on equipment (e.g., tape deck, air conditioner)
 (010) Left instrument panel and below
 (011) Center instrument panel and below
 (012) Right instrument panel and below
 (013) Glove compartment door
 (014) Knee bolster
 (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
 (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
 (017) Windshield reinforced by exterior object, (specify):
 (019) Other front object (specify):

CODES FOR INTERIOR COMPONENTS

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
 (052) Left side hardware or armrest
 (053) Left A (A1/A2)-pillar
 (054) Left B-pillar
 (055) Other left pillar (specify):
 (056) Left side window glass
 (057) Left side window frame
 (058) Left side window sill
 (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (060) Other left side object (specify):

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests
 (102) Right side hardware or armrest
 (103) Right A (A1/A2)-pillar
 (104) Right B-pillar
 (105) Other right pillar (specify):
 (106) Right side window glass
 (107) Right side window frame
 (108) Right side window sill
 (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (110) Other right side object (specify):

INTERIOR

- (151) Seat, back support
 (152) Belt restraint webbing/buckle
 (153) Belt restraint B-pillar or door frame attachment point
 (154) Other restraint system component (specify):
 (155) Head restraint system
 (160) Other occupants (specify):
 (161) Interior loose objects
 (162) Child safety seat (specify):
 (163) Other interior object (specify):

AIR BAG

- (170) Air bag-driver side
 (175) Air bag compartment cover-driver side
 (180) Air bag-passenger side
 (185) Air bag compartment cover-passenger side
 (190) Other air bag (specify)
 (195) Other air bag compartment cover (specify)

ROOF

- (201) Front header
 (202) Rear header
 (203) Roof left side rail
 (204) Roof right side rail
 (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
 (252) Floor or console mounted transmission lever, including console
 (253) Parking brake handle
 (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
 (302) Backlight storage rack, door, etc.
 (303) Other rear object (specify):

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
 (402) Steering control devices (attached to OEM steering wheel)
 (403) Steering knob attached to steering wheel
 (405) Replacement steering wheel (i.e., reduced diameter)
 (406) Joy stick steering controls
 (407) Wheelchair tie-downs
 (408) Modification to seat belts, (specify):
 (409) Additional or relocated switches, (specify):
 (410) Raised roof
 (411) Wall mounted head rest (used behind wheel chair)
 (412) Other adaptive device (specify):

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
 (2) Probable
 (3) Possible
 (9) Unknown

NASS CDS OCCUPANT INJURY FORM:
CASE VEHICLE RIGHT FRONT PASSENGER

**BODY DIAGRAMS AND MEDICAL RECORDS
FROM
INITIAL TREATMENT FACILITY**

CASE NUMBER IN 9620

MISSING DATA

THE FOLLOWING DATA ARE NOT INCLUDED IN THIS CASE:

PAGE NUMBER(S)

1

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs, Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(3) Bilateral
(4) Thorax			(4) Central
(5) Abdomen			(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:	is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(9) Unknown
			(0) Whole region

Type of Anatomic Structure

- (1) Whole Area
(2) Vessels
(3) Nerves
(4) Organs (includes Muscles/ligaments)
(5) Skeletal (includes joints)
(6) Head - LOC
(9) Skin

Whole Area

- (02) Skin - Abrasion
(04) Skin - Contusion
(06) Skin - Laceration
(08) Skin - Avulsion
(10) Amputation
(20) Burn
(30) Crush
(40) Degloving
(50) Injury - NFS
(90) Trauma, other than mechanical

Head - LOC

- (02) Length of LOC
(04) Level
(06) of
(08) Consciousness
(10) Concussion

Spine

- (02) Cervical
(04) Thoracic
(06) Lumbar

Abbreviated Injury Scale

- (1) Minor Injury
(2) Moderate Injury
(3) Serious Injury
(4) Severe Injury
(5) Critical Injury
(6) Maximum (untreatable)
(7) Injured, unknown severity

SOURCE OF INJURY DATAOFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
(2) Hospital/medical records other than emergency room (e.g., discharge summary)
(3) Emergency room records only (including associated X-rays or other lab reports)
(4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

- (5) Lay coroner report
(6) E.M.S. personnel
(7) Interviewee
(8) Other source (specify):
(9) Police

INJURY SOURCE**CONFIDENCE LEVEL**

- (1) Certain
(2) Probable
(3) Possible
(9) Unknown

DIRECT/INDIRECT INJURY

- (1) Direct contact injury
(2) Indirect contact injury
(3) Noncontact injury
(7) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

• Arrived via a motor vehicle
(i.e., not ambulance (ER))

• Cannot describe exact mechanism of injury (ER)

Restrained?

___ No

___ Yes

Blood Alcohol Level
(mg/dl)

BAL = ___

Glasgow Coma
Scale Score

GCSS = ___

Units of Blood
Given

Units = ___

Arterial Blood Gases

pH = ___

PO₂ = ___

PCO₂ = ___

HCO₃ = ___

• Small blood both
nares (ER)

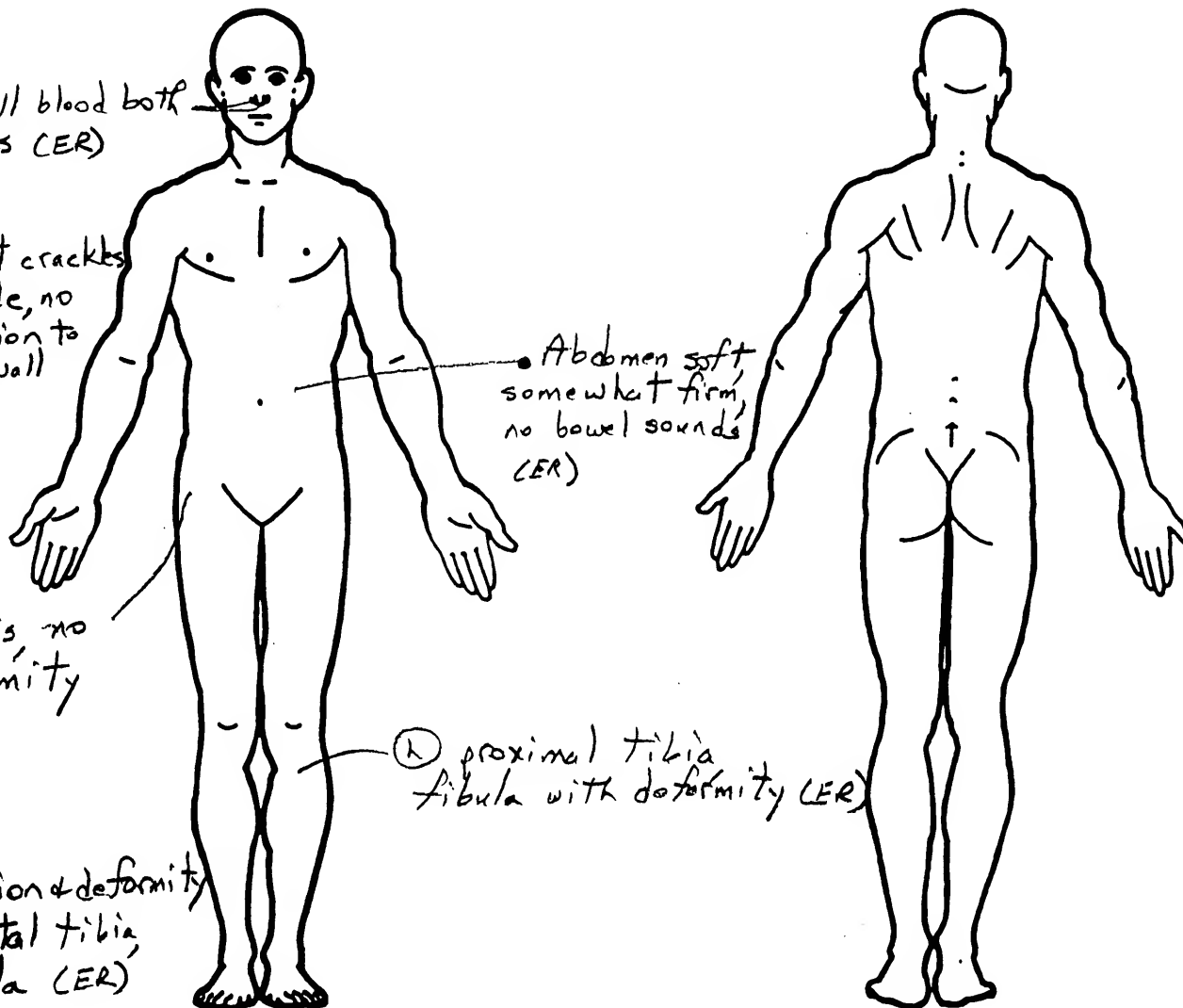
• Chest crackles
① side, no
contusion to
chest wall
(ER)

• Abdomen soft
somewhat firm,
no bowel sounds
(ER)

• Pelvis, no
deformity
(ER)

① proximal tibia
fibula with deformity (ER)

• Abrasion & deformity
② distal tibia,
fibula (ER)



OFFICIAL INJURY DATA — SKELETAL INJURIES

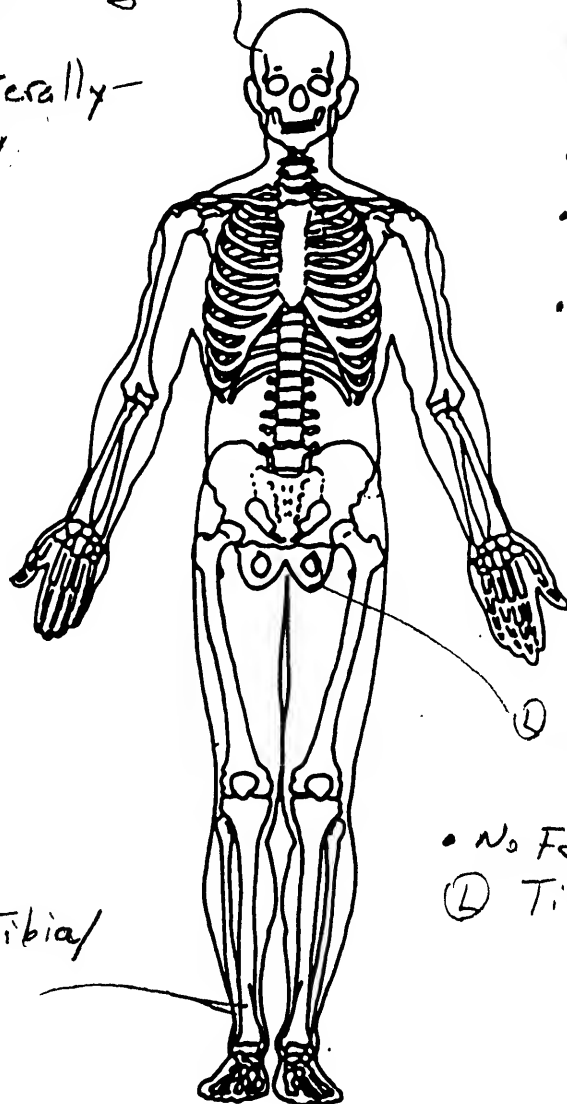
Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

Depressed fragment \textcircled{R}
frontotemporal region

(ER)

• Fx skull, laterally-
seen on X-ray

(ER)



Dx: (ER)

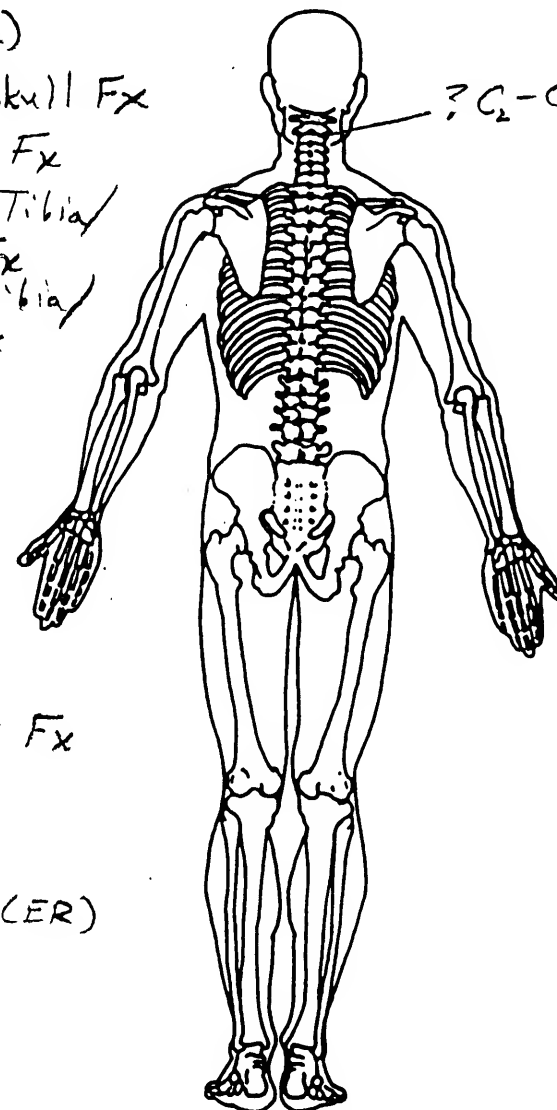
- Depressed skull Fx
- R/o Pelvic Fx
- \textcircled{L} Proximal Tibia/
Fibula Fx
- \textcircled{R} Distal Tibia/
Fibula Fx

\textcircled{R} Pubic radius Fx
(ER)

• No Fracture

\textcircled{L} Tibia/Fibula (ER)

\textcircled{R} distal Tibia/
Fibula Fx



? C₂-C₃ widening

INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): _____
- (019) Other front object (specify): _____

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): _____
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): _____

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): _____
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): _____

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): _____
- (155) Head restraint system
- (160) Other occupants (specify): _____
- (161) Interior loose objects
- (162) Child safety seat (specify): _____
- (163) Other interior object (specify): _____

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): _____
- (195) Other air bag compartment cover (specify): _____

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): _____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): _____
- (409) Additional or relocated switches, (specify): _____

- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): _____

EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): _____
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): _____
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): _____
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): _____
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (551) Ground
- (598) Other vehicle or object (specify): _____
- (599) Unknown vehicle or object

NONCONTACT INJURY

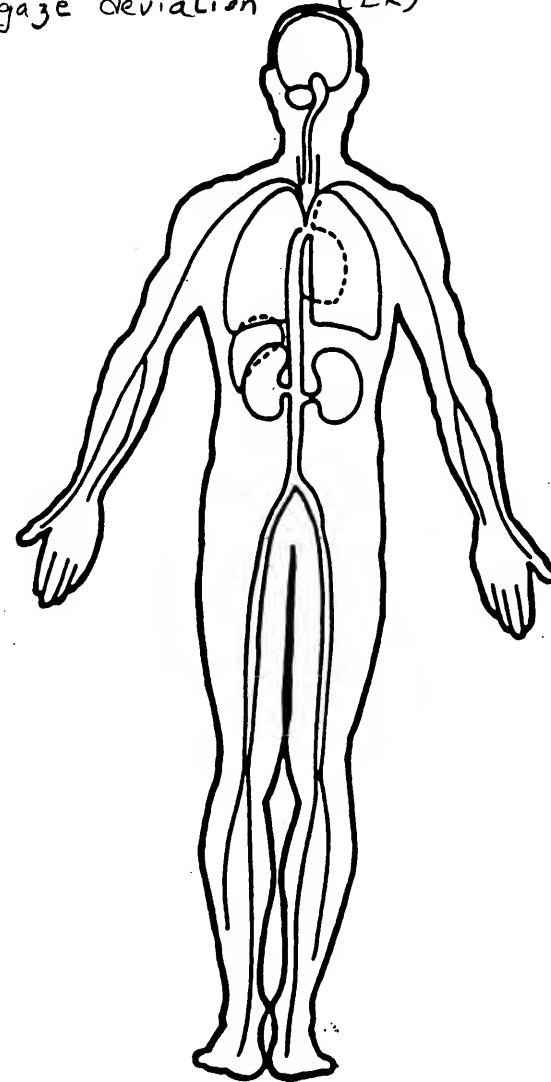
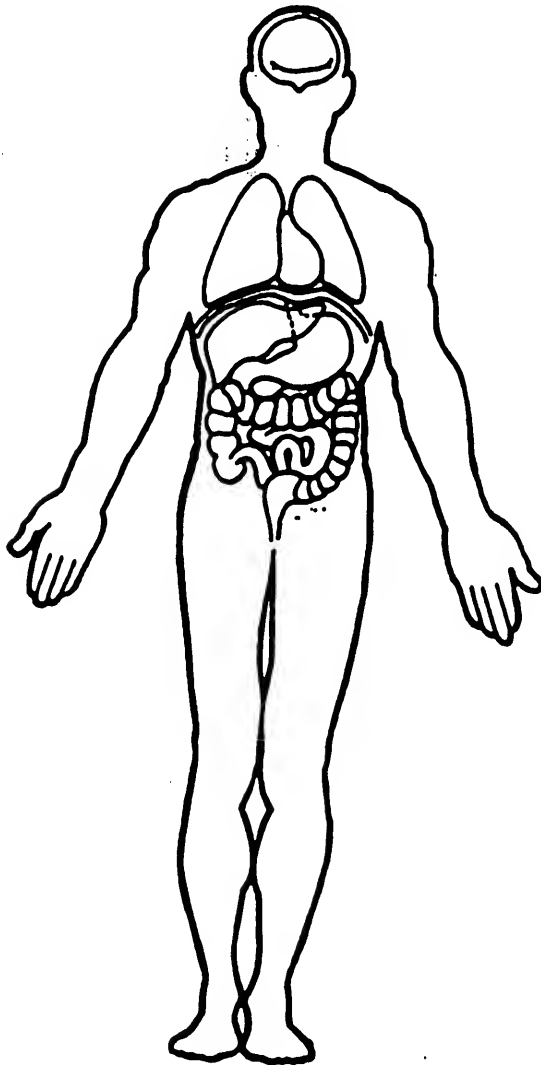
- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): _____
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA —INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

• Carried into ER in mother's arms, unresponsive (ER)

• Unresponsive to deep pain (ER)
• Pupils fixed + dilated with (L) lateral gaze deviation (ER)



CAUSE OF DEATH

ICD-9-CM

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number	<u>10</u>	3. Vehicle Number	<u>01</u>
2. Case Number - Stratum	<u>9620</u>	4. Occupant Number	<u>02</u>

INJURY DATA													
Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.													
A.I.S. - 90													
Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number			
Loss of consciousness	1st 5. <u>2</u>	6. <u>1</u>	7. <u>6</u>	8. <u>02</u>	9. <u>14</u>	10. <u>5</u>	11. <u>0</u>	12. <u>011</u>	13. <u>1</u>	14. <u>1</u>	15. <u>00</u>		
Middle brain hemorrhage	16. <u>2</u>	17. <u>1</u>	18. <u>4</u>	19. <u>02</u>	20. <u>10</u>	21. <u>5</u>	22. <u>8</u>	23. <u>011</u>	24. <u>1</u>	25. <u>1</u>	26. <u>00</u>		
Cerebral Contusion	27. <u>2</u>	28. <u>1</u>	29. <u>4</u>	30. <u>06</u>	31. <u>04</u>	32. <u>3</u>	33. <u>2</u>	34. <u>011</u>	35. <u>1</u>	36. <u>1</u>	37. <u>00</u>		
Epidural hematoma (R)	38. <u>2</u>	39. <u>1</u>	40. <u>4</u>	41. <u>06</u>	42. <u>36</u>	43. <u>5</u>	44. <u>1</u>	45. <u>011</u>	46. <u>1</u>	47. <u>1</u>	48. <u>00</u>		
Intracerebral Hematoma (R)	49. <u>2</u>	50. <u>1</u>	51. <u>4</u>	52. <u>06</u>	53. <u>38</u>	54. <u>4</u>	55. <u>1</u>	56. <u>011</u>	57. <u>1</u>	58. <u>1</u>	59. <u>00</u>		
Subdural Hematoma (L)	60. <u>2</u>	61. <u>1</u>	62. <u>4</u>	63. <u>06</u>	64. <u>56</u>	65. <u>5</u>	66. <u>2</u>	67. <u>011</u>	68. <u>1</u>	69. <u>1</u>	70. <u>00</u>		
Cerebral Edema	71. <u>2</u>	72. <u>1</u>	73. <u>4</u>	74. <u>06</u>	75. <u>70</u>	76. <u>3</u>	77. <u>9</u>	78. <u>011</u>	79. <u>1</u>	80. <u>1</u>	81. <u>00</u>		
Intraventricular Hemorrhage	82. <u>2</u>	83. <u>1</u>	84. <u>4</u>	85. <u>06</u>	86. <u>78</u>	87. <u>4</u>	88. <u>9</u>	89. <u>011</u>	90. <u>1</u>	91. <u>1</u>	92. <u>00</u>		
Fracture, compound skull (R)	93. <u>2</u>	94. <u>1</u>	95. <u>5</u>	96. <u>04</u>	97. <u>04</u>	98. <u>3</u>	99. <u>1</u>	100. <u>011</u>	101. <u>1</u>	102. <u>1</u>	103. <u>00</u>		
Fracture, pubic ramus (L)	104. <u>2</u>	105. <u>8</u>	106. <u>5</u>	107. <u>26</u>	108. <u>00</u>	109. <u>2</u>	110. <u>2</u>	111. <u>252</u>	112. <u>2</u>	113. <u>1</u>	114. <u>00</u>		

OCCUPANT INJURY DATA											
Source of Injury Data	A.I.S. - 90						Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Fracture ^{11th} Fibula	<u>2</u>	<u>8</u>	<u>5</u>	<u>16</u>	<u>10</u>	<u>2</u>	<u>1</u>	<u>180</u>	<u>3</u>	<u>1</u>	<u>00</u>
Fracture ^{12th} Tibia	<u>2</u>	<u>8</u>	<u>5</u>	<u>34</u>	<u>14</u>	<u>2</u>	<u>1</u>	<u>180</u>	<u>3</u>	<u>1</u>	<u>00</u>
Fracture ^{13th} tibia	<u>2</u>	<u>8</u>	<u>5</u>	<u>34</u>	<u>22</u>	<u>3</u>	<u>2</u>	<u>180</u>	<u>3</u>	<u>1</u>	<u>00</u>
abrasion ^{14th} shin	<u>3</u>	<u>8</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>1</u>	<u>180</u>	<u>2</u>	<u>1</u>	<u>00</u>
15th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
16th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
17th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
18th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
19th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
20th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
21st	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
22nd	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
23rd	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
24th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —
25th	—	—	—	— — —	— — —	—	—	— — — —	—	—	— — —

Fracture 2
11th
Fibula

Fracture 12th 2
(R) Tikia

Fracture
④ 13th
tibia

Abrasion 3
(R) 14th
shin

CHART COPY

EMERGENCY/AMBULATORY
CARE

HOSPITAL NO.	ADMISSION DATE AND TIME	FAMILY PHYSICIAN	MEDICAL RECORD NO.
	96 1750		
NAME AND ADDRESS	MAIDEN NAME	PREVIOUS ADMIT NAME	PHONE
COUNTY	BIRTHDATE	AGE	BIRTHPLACE
ROOM NO.	AFFILIATION	SMOKER	PUBLICITY
	CHURCH NOT CREDITED		
EMPLOYER NAME AND ADDRESS	PHONE	OCCUPATION	ATTENDING PHYSICIAN
NONE			DR.
DEPARTMENT	SOCIAL SECURITY NO.	REFERRING PHYSICIAN	
NEXT OF KIN: FRIEND	PHONE	MOTHER'S FULL NAME (INCLUDING MAIDEN)	
RELATIONSHIP	FATHER'S NAME		
MOTHER			
NAME AND ADDRESS	PHONE	EMPLOYER'S NAME AND ADDRESS	PHONE
RELATIONSHIP		DEPARTMENT	
FATHER			
CARRIER	CONTRACT	GROUP	AS UNAS SUBSCRIBER
T	P	R	B/P
EMPL. REL.	DATE OF ACCIDENT	E.R. ADMIT	DISCHARGE DATE AND TIME
			96

DESCRIPTION OF ACCIDENT AND/OR ILLNESS

carried MVA
ALLERGIES

HISTORY AND EXAM

MEDS TAKEN AT

1730 - 5410 BIF was involved in MVA. Pt. brought in by
mother's arms. Ab. family cannot describe exact mechanism of injury.
Pt. unresponsive. PMH: O. FH: Sibling died of head trauma in unrelated incident.
SH: @ home with both parents. Previously depressed fragment of frontal/parietal region.
PE: Unresponsive to deep pain. Pupils fixed, dilated & left eye globe deviation.
Small blood in both nostrils. Neck - cracked immediately.
Chest - crackles at base. No contusion to chest wall. Heart - RRR.
Abdomen - Soft (HFP) Somewhat firm. BS ⊕. Pelvis - deformity.
Ext - Abrasion deformity. distal tib/fib. Lt. prox tib/fib & deform. Pubes + 2 distal.

PHYSICIAN'S ORDERS AND TREATMENT IN E.R.

CHECK HERE IF SEPARATE DOCTOR'S ORDER SHEET IS USED

X-RAYS -

156/10.5/401

138/110/9/0.4

3.4/23/45

PT 13.2

PTT 26.8

TRAUMA LABS

fx. Skull
Severe
LX.

1. C-spine
? C2-C3 widening
Oll ⊕
2. CXR - NMP
(ERMO + Dr. Ward)
3. AP pelvis -
⊕ Lt. pubic ramus fx.
4. Lt. tib/fib - distal tib/fib.
5. Lt. Tib - 2 fx.

See cont.
sheet.

850 - notified.

850 -
Rads delay in accept pt.
with head trauma team.

POSITION OF PATIENT

☐ REFERRED TO PHYSICIAN'S OFFICE

D/C STATUS

☐ GOOD ☐ FAIR☐ STABLE ☐ POOR

ROOM

NURSE'S SIGNATURE

ATTENDING PHYSICIAN

REFUSED TREATMENT

☐ ADMITTED

DIAGNOSIS

Multiple Trauma
depressed skull fx.
R/O C-spine injury
Endotracheal intubation
R/O pelvic fx.
Lt. prox. tib/fib fx.
Rt. distal tib/fib fx.

Trauma

**BODY DIAGRAMS AND MEDICAL RECORDS
FROM
FACILITY TO WHICH
OCCUPANT WAS TRANSFERRED AND HOSPITALIZED**

CASE NUMBER IN9620

MISSING DATA

THE FOLLOWING DATA ARE NOT INCLUDED IN THIS CASE:

PAGE NUMBER(S)

1

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck			(3) Bilateral
(4) Thorax			(4) Central
(5) Abdomen	<u>Vessels, Nerves, Organs.</u>	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(5) Anterior
(6) Spine	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:		(9) Unknown
			(0) Whole region
Type of Anatomic Structure	Whole Area	Abbreviated Injury Scale	
(1) Whole Area	(02) Skin - Abrasion	(1) Minor Injury	
(2) Vessels	(04) Skin - Contusion	(2) Moderate Injury	
(3) Nerves	(06) Skin - Laceration	(3) Serious Injury	
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion	(4) Severe Injury	
(5) Skeletal (includes joints)	(10) Amputation	(5) Critical Injury	
(6) Head - LOC	(20) Burn	(6) Maximum (untreatable)	
(9) Skin	(30) Crush	(7) Injured, unknown severity	
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

SOURCE OF INJURY DATA**INJURY SOURCE
CONFIDENCE LEVEL****DIRECT/INDIRECT INJURY****OFFICIAL RECORDS**

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

National Accident Sampling System-Crashworthiness Data System: Occupant Injury Form

MEDICAL RECORDS FROM

Possibly unrestrained (DS)

child lying on Aunt's (driver) lap. (DS, PP3)

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

Hospitalized 7 days (AR, DS)

Riding with Aunt (DS, PP3)

Entered initial ER in mother's arms (DS)

Restrained?

☒ No (PP2, PP3)

☐ Yes

Blood Alcohol Level (mg/dl)

BAL = ____

Glasgow Coma Scale Score

GCSS = ____

Units of Blood Given

Units = ?

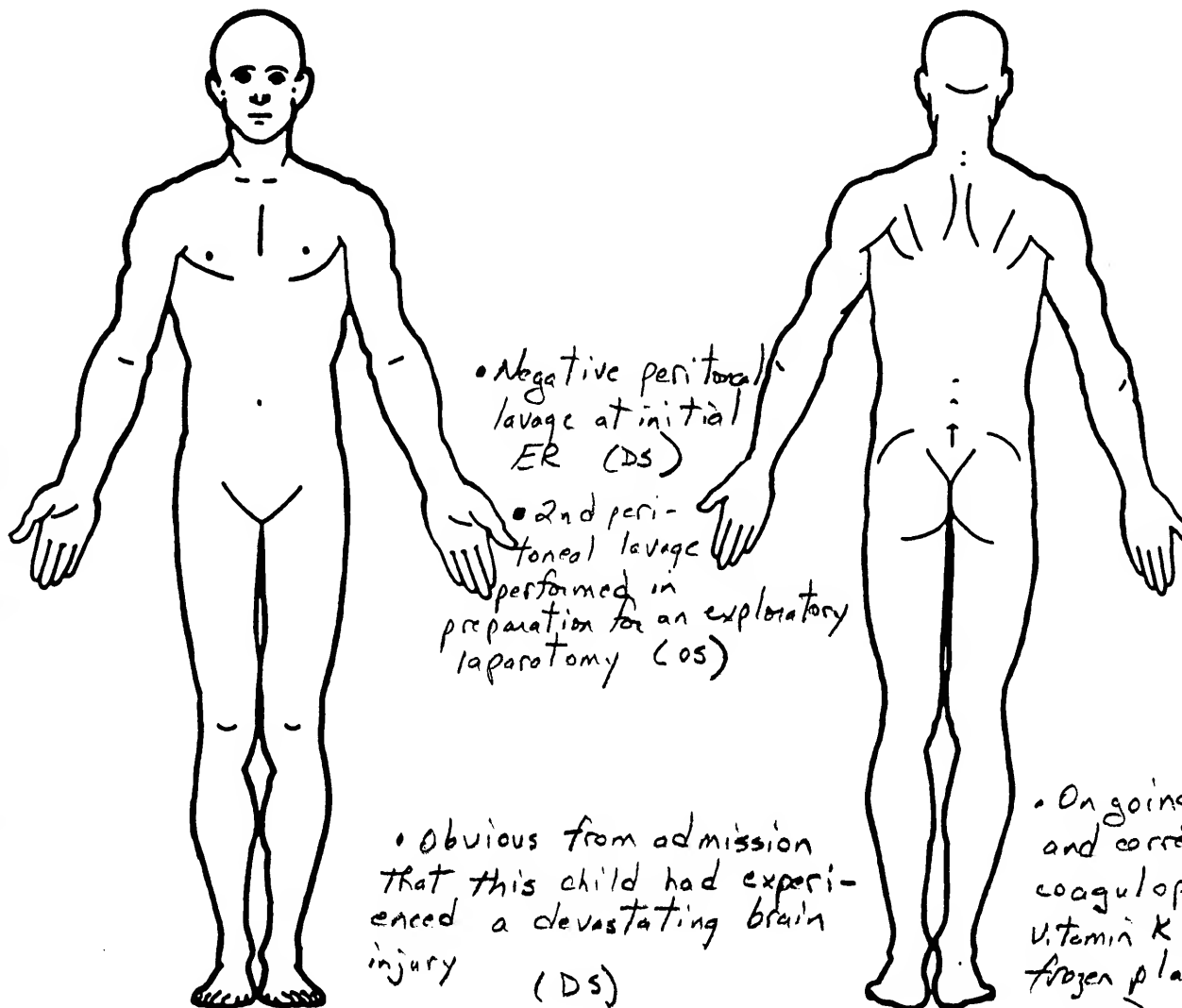
- Fresh frozen plasma
- Platelets
- Packed red blood cells (DS)
- Arterial Blood Gases

pH = ____

PO₂ = ____

PCO₂ = ____

HCO₃ = ____



Negative peritoneal lavage at initial ER (DS)

2nd peritoneal lavage performed in preparation for an exploratory laparotomy (OS)

Obvious from admission that this child had experienced a devastating brain injury (DS)

On going re-evaluation and correction of coagulopathy using vitamin K and fresh frozen plasma (DS)

OFFICIAL INJURY DATA — SKELETAL INJURIES

- (R) Fronto parietal intracerebral hematoma adjacent to epidural site

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

- skull fracture (PX)
- (AR, DS, PP1, PP3)

- skull defect palpated (R) cranium (PP3)
- 3x3 piece of bone (R skull) removed from fracture site (OS)

- Pelvic Fx (AR, DS, PP1)

- (R) femur: negative (PX)

- (R) Tibial, fibular fracture (AR, DS)

- Displaced fracture involving metaphyseal area (R) distal fibula + tibia (CV)

- Transverse Fx through distal (R) tibia + fibula with medial displacement of distal fx fragments (PX) + anterior displacement of proximal fragment

- skull fracture from (R) temporal bone extending up through the temporal bone into posterior frontal area (PX)

- obvious skull fracture at initial ER (DS, PP3)

- (R) epidural hematoma, > 2 cm, with marked compression of lateral ventricles + displacement to (L) (PX)

- (L) subdural hematoma, 6-7 mm, (L) frontal — extending to (L) parietal + > 1 cm in size (PX)

- (L) Femur: negative (PX)

- obvious lower extremity fractures at initial ER (DS, PP1)

- (L) Tibial Fx (AR, DS)

- Displaced Salter-Harris fracture of the proximal tibial physis; shaft fragment displaced posteriorly (CV, PX)

- Anterior + lateral dislocation of proximal tibial epiphysis (PX)

- CT scan of entire cervical spine on 2nd day showed no evidence of fracture or dislocation (DS, PX)

- slight depression and comminution + subcutaneous air (PX)

INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): _____
- (019) Other front object (specify): _____

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (056) Other left pillar (specify): _____
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): _____

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): _____
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): _____

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): _____
- (155) Head restraint system
- (160) Other occupants (specify): _____
- (161) Interior loose objects
- (162) Child safety seat (specify): _____
- (163) Other interior object (specify): _____

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side end jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): _____
- (195) Other air bag compartment cover (specify): _____

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): _____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts. (specify): _____
- (409) Additional or relocated switches. (specify): _____
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): _____

EXTERIOR OF OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): _____
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): _____
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): _____
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): _____
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (551) Ground
- (598) Other vehicle or object (specify): _____
- (599) Unknown vehicle or object

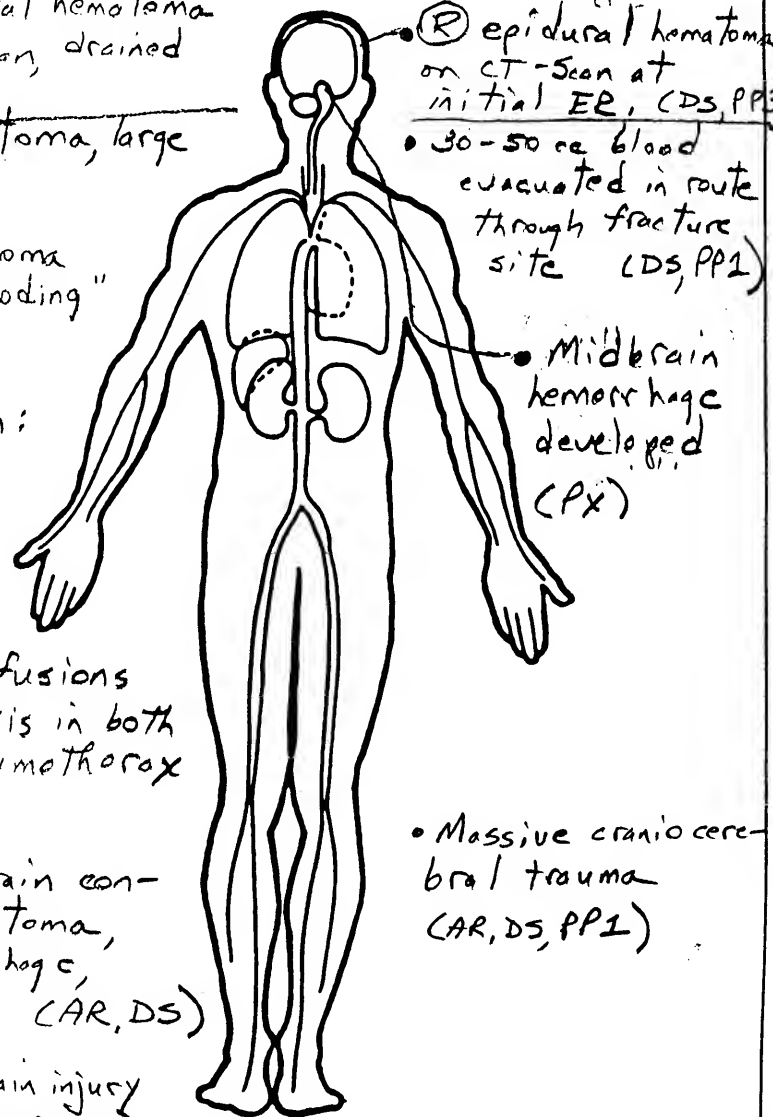
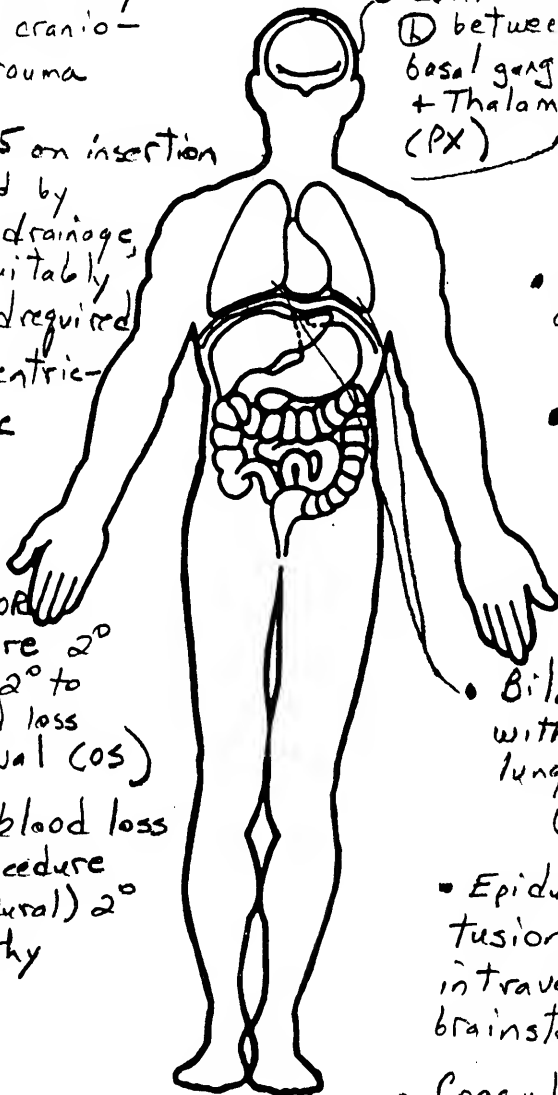
NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): _____
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA — INTERNAL INJURIES

- Pupils fixed + dilated with \textcircled{R} lateral gaze upon this facility's arrival at initial facility for transport. Also alternate decerebrate and decorticate posturing (DS, PP3)
 - Moves all 4 extremities, but nothing purposeful
- Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source (PP3) of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interview data are unavailable.)

- Cerebral edema (DS, PP1, PX)
- Seizures secondary to massive cranio-cerebral trauma (DS)
- ICP was 35 on insertion and managed by ventricular drainage, but never suitably controlled and required continuous ventricular drainage (DS)
- Pt coded in OR during procedure 2° hypovolemia 2° to extensive blood loss prior to arrival (OS)
- Significant blood loss during 2nd procedure (draining subdural) 2° to coagulopathy (PP2, OS)
- Severe Head Injury (CN)
- Intraventricular hemorrhage in \textcircled{L} , 3rd + 4th ventricle (PX)
- Confusion on \textcircled{L} between basal ganglia + Thalamus (PX)
- \textcircled{R} epidural hematoma on CT scan, drained twice (DS)
- Epidural hematoma, large (PP1, PP2, OS)
- Subdural hematoma developed during "coding" (DS, PP2, OS)
- CT Scan abdomen: negative (DS, PX)
- Bilateral pleural effusions with some atelectasis in both lung bases — no pneumothorax (PX)
- Epidural hematoma, brain contusion, subdural hematoma, intraventricular hemorrhage, brainstem hemorrhage (AR, DS)
- Coagulopathy 2° to brain injury (AR, DS)
- Dilated + fixed pupils with \textcircled{L} gaze at initial ER (DS)
- \textcircled{R} epidural hematoma on CT-Scan at initial ER, (DS, PP1)
- 30-50 cc blood evacuated in route through fracture site (DS, PP1)
- Midbrain hemorrhage developed (PX)
- Massive cranio-cerebral trauma (AR, DS, PP1)



CAUSE OF DEATH

Massive craniocerebral trauma due to MVA (AR, DS)

ICD-9-CM

803.25 closed skull fracture with subarachnoid, subdural or extradural hemorrhage and prolonged loss of consciousness (AR)
 > 24 hours without return
 808.8 closed pelvic fracture unspecified
 823.00 Fracture Tibia/Fibula, proximal, closed
 823.82 Fracture Tibia/Fibula, unspecified, closed, involving fibula with tibia

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified	276.5 disorder fluid, electrolyte, acid-base balance—due to 285.1 Acute posthemorrhagic anemia 286.9 Coagulation defect, other or unspecified <u>Procedures</u>	balance—due to volume depletion
54.25 laryngoscopy 79.06 closed reduction without internal fixation tibia + fibula 96.04 Insertion of endotracheal tube 96.72 Irrigation and cleanings		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

PP = Physician Progress Notes

02:51

=====

ADMISSION/ DISCHARGE RECORD REVISED

=====

ADM: 96
MED REC # MS: S

=====

ADDRESS: _____ TEACHING SER: _____
 ADDRESS2: _____ PHONE: _____ DOB: 91
 CITY: _____ CTY: _____
 ST: _____ ZIP: _____
 MAIDEN: _____
 PHONE: _____
 REL: MO _____
 PHONE: _____
 ADDRESS: _____
 ADMIT TIME: 09:58PM CLERK: CC ADMIT SERVICE: 012 MOA:
 PREV IF REG: _____ PREV ER REG: _____
 DISCHARGE DATE: 96 @ 1852 LAST X-RAY: _____
 INS1 PRECERT: _____ INS2 PRECERT: _____
 INS. CO. NAME _____

ADVANCED DIRECTIVES: NONE

=====

ADM DIAGNOSIS: MVA/MULTIPLE TRAUMA
 CODES: ::CONSULTS:

01-24 3892:
 01-59
 01-31
 29-06
 96-72
 96-04
 80325
 808-8
 285-1
 2765
 2869
 8230
 82312
 6812-1

PROCEDURES: *Debridement of lacerations, closed reduction of rib fracture, Peritoneal lavage, Aycois*
Evacuation of Epidural hematoma, Subdural hematoma, local lobular abscess, 6-13 Fournier's abscess, mechanical ventilation
 PRINCIPAL DIAGNOSIS: *Massive Cranio-cerebral trauma due to MVA - passenger*
 SECONDARY DIAGNOSES: *skull fracture, epidural hematoma, brain contusion, subdural hematoma, intraventricular hemorrhage, brainstem hemorrhage, (L) tibial fracture, pelvic fracture, (R) tibial/fibular fracture, coagulopathy*

PROGNOSIS: _____
 SIGNATURE OF HOUSE STAFF PHYSICIAN: _____ :DISCHARGE SUMMARY ASSIGNED TO: _____
 DISPOSITION: HOME ECF HHS OTH INST _____ MD
 OTHER: _____
 RESULT: RECOVERED IMPROVED UNIMPROVED _____ :DICTATED BY: _____ MD
 NOT TREATED RELEASED AMA DIED X
 AUTOPSY REQUESTED? YES NO :DATE: _____
 AUTOPSY PERFORMED? YES NO

ATTENDING
 SIGNATURE X _____

DATE: 96

ADMISSION/DISCHARGE RECORD

NAME:

#:

DISCHARGE SUMMARY

ADMIT DATE:

96

DISCHARGE DATE:

FINAL DIAGNOSES:

1. Motor vehicle accident, passenger, with massive craniocerebral trauma, including skull fracture, epidural hematoma, subdural hematoma, brain contusion, intraventricular hemorrhage, brain stem hemorrhage, and cerebral edema.
2. Seizures secondary to number one.
3. Consumptive coagulopathy secondary to brain injury.
4. Bilateral tibial fractures and right iliac fracture.
5. Pelvic fracture.

CONSULTANTS: Dr.
orthopedics, Dr.

III--neurosurgery, Dr.
-trauma surgery.

REFERRING PHYSICIAN: Dr.
County in

of

HISTORY OF PRESENT ILLNESS: The patient is a year-old girl referred from Dr. because of multiple trauma. As best can be determined, details of the accident are as follows: The child was riding in the front seat, possibly unrestrained with her aunt. Apparently the child fell asleep and as she slumped over toward the aunt's lap, the aunt attempted to straighten the child, at which time she lost control of the vehicle, with it striking a culvert at approximately fifty-miles-per-hour and coming to an immediate stop. Other scene details are unknown. The child was carried to County Hospital Emergency Room by the family and entered the emergency room in mother's arms. Initial examination by Dr. revealed obvious skull fracture, dilated and fixed pupils with a left gaze, and obvious lower extremity fractures. The cervical spine was immobilized and the child was intubated. Further evaluation revealed a negative peritoneal lavage, and on CT scan of the brain a right-sided epidural hematoma. We were notified by Dr. and offered to provide transport. We recommended Mannitol and loading with Dilantin. Upon our arrival to the Emergency Room, the child was with a stable airway (endotracheal tube), dilated and fixed pupils with a right gaze at this time, and alternate decerebrate and decorticate posturing. The child was quickly loaded and transport initiated. The trauma team and Dr. were notified of the incoming patient. In transit, the child became bradycardia, presumably secondary to increasing mass effect on the brain. The epidural hematoma was partially evacuated of 30-50

D

Chart Copy

NAME:

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DISCHARGE SUMMARY - CONTINUED
PAGE 2

cc bright red blood by placing an intravenous catheter through the fracture line for drainage.

Upon arrival to the [redacted] the child was taken directly to CT, then immediately to the operating room by Dr. [redacted] and Dr. [redacted] (anesthesia). CT confirmed the epidural. The calvarium was quickly entered by Dr. [redacted] for drainage, after which time; however, the child arrested with a subsequent fifteen minute loss of sinus rhythm and CPR. After resuscitation, Dr. [redacted] again evacuated further brain hematoma. The child was administered fresh frozen plasma, platelets, and packed red blood cells during the procedure. After emergency surgery, the child was again evaluated for possible occult abdominal trauma with a negative CT scan.

The child was then admitted to the Pediatric Intensive Care Unit.

PAST MEDICAL HISTORY: Sketchy upon admission. Was essentially unremarkable for significant medical diseases in this child.

FAMILY HISTORY: Significant family history was the fact that this child had a sister die as [redacted] when that child overturned a table, crushing her head in a laundry [redacted] area.

That child was hospitalized in an Intensive Care Unit prior to death.

SUMMARY OF HOSPITAL COURSE: The child was admitted to the Pediatric Intensive Care Unit. Therapy was maintained in hard cervical collar for C-spine immobilization. CT scan of the entire cervical spine on the second hospital day showed no evidence of fracture or dislocation. The child was maintained on mechanical ventilation. Seizures were treated with Ativan and Dilantin. Cerebral perfusion was maintained by assuring mean arterial pressures at least 60 using dopamine and phenylephrine drips as required. There was ongoing re-evaluation and correction of coagulopathy using vitamin K and fresh frozen plasma as needed. Stress ulcer prophylaxis was provided with Pepcid. A jejunal tube was placed and early enteral feedings begun. On the second hospital day, a Camino intraventricular monitor and drainage system was placed. ICP was 35 upon insertion and this was managed by ventricular drainage, and eventually barbiturate coma. In spite of these measures, ICP was never suitably controlled and required continuous ventricular drainage.

It was obvious from admission that this child had experienced a devastating brain injury. Frank and detailed discussions were held with the family from the onset with the information given that the child would probably have severe

D

Chart Copy

NAMEY

Page 3

DISCHARGE SUMMARY - CONTINUED
PAGE 3

brain damage and very possibly a persistent vegetative state, should she survive. All therapies were discussed from the onset, including the option of withdrawing therapy. Initially the family opted for full aggressive therapies. By the third day, it became apparent that the child may possibly need drainage of another accumulated subdural hematoma. At this time; however, the family opted against further surgical intervention.

As the course evolved over the four hospital days, it became obvious the child had experienced a devastating brain injury. CT scan confirmed worsening of the initial process. After thorough discussions with the family, the family decided to withdraw therapy. The treating staff and I fully agreed with this decision. On At 6:40 p.m., the child was removed from the ventilator and placed in mom's arms. There was no respiratory effort. At 6:55, there were no heart sounds and the child was pronounced dead.

In summary, this was a -year-old girl who experienced massive craniocerebral trauma from a motor vehicle accident, leading to her death

M.D.

D: 96
T: 96 9:03 A
LC/transcend

cc:

M.D.

Y

D

Chart Copy

NAME:
#:
ROOM:

ADMIT DATE:
CONSULT DATE:

CONSULTATION

REFERRING:
CONSULTING:

CHIEF COMPLAINT:

Multiple trauma with head injury and fractures of both lower extremities.

HISTORY OF PRESENT ILLNESS:

This is a -year-old child who was involved in a motor vehicle accident on the evening of 1/16, sustaining a severe head injury as well as injuries to the lower extremities. She was brought to the Medical Center and underwent emergency treatment but the prognosis for recovery of brain function is poor. I have been asked to see her in regard to the injuries to the lower extremities.

Examination at this time reveal splints applied to both legs, these are removed and she has some deformity noted in the supramalleolar area of the right distal tibia. In addition there is a posterior angulation of the left proximal tibia at the knee joint but circulation in both lower extremities appears to be intact. The x-rays were reviewed and on the left side she has a displaced Salter-1 fracture on the proximal tibial physis. The shaft fragment is displaced posteriorly. The remainder of the extremity appears to be intact. The x-ray of the right leg reveals a displaced fracture involving the metaphyseal area of the right distal fibula and tibia.

IMPRESSION:

1. Salter-1 displaced fracture of the left proximal tibial epiphysis.
2. Displaced fracture of the right distal tibia and fibula.

DISPOSITION:

Under no sedation because of her head injury I was able to reduce both legs. Close reduction of the tibial epiphysis was carried out with the leg flexed and with the anterior pressure applied to the distal fragment. I applied a long leg cast with the knee flexed about 80 degrees. Then closed reduction on the right tibial and fibula fracture was carried out and a short leg cast was applied to the right leg. The x-rays have been reviewed post reduction. She has also an anatomical reduction on the left proximal tibial epiphysis with only about 10% offset. I believe this is acceptable at this time but we will need followup radiographic evaluation. In respect to the right leg she has satisfactory alignment in the AP and lateral plane but there is a few

D

NAME:

#:

CONSULTATION - CONTINUED
PAGE 2

millimeter shortening of the fragment. Once again, this was followed up with radiographic evaluation.

I plan to re-x-ray the leg in several days and make further recommendations at that time depending on her overall condition.

M.D.

D: 96
T: 96 11:08 A
FK/ses

cc:

D

HISTORY-PHYSICAL-PROGRESS-NURSING-OTHER

-(CIRCLE ONE)

DATE/TIME

	aspiration of epidural through fracture
	line. is as head being
	shaved. 44 G Amput X 2 placed
	through fracture line with
	aspiration of ~15 cc bright red
	blood and further drip of ~15+
	cc blood from catheter. Dr
	notified by phone and Dr
	trauma service. Met both in CT
	on arrival - child taken directly to OR.
	child passenger, unrestrained, MVA
	Imp: multiple trauma
	- massive craniocerebral
	trauma with skull
	fracture, epidural hematoma,
	cerebral edema
	- fracture bilateral lower ext
	and pelvis cervical spine injury
	- ? thoracic spine injury (doubt) doubt
	- ? intra-abdominal trauma
	- incomplete history
	Plan: Immediately to OR - Dr
	and Trauma Surgery
	Prognosis poor?
	Prognosis poor
	DOOR
	MR
	CPI
	AGE - 5 DOB -
	ATC
	FIN. CLASS - 0
	ADMIT DATE - 96

USE ONE SIDE ONLY

PLEASE SIGNATURE EACH ENTRY

91

Progress Notes

(NOT for History & Physical)

DATE/TIME

96	Admission
	A 40 year old male referred from
	Hosp. in by Dr.
	because of multiple trauma.
	Details sketchy, but child was involved
	in MVA as an unrestrained front seat
	passenger in car driven by aunt (?) -
	child reportedly asleep in lap of aunt
	who was driving - aunt lost control of
	car (when child moved?) ran off road,
	hit drainage culvert with abrupt stop. abrupt stop
	Asw details unknown. To ER in
	Exact details unknown but
	we received call at 6 ⁴⁵ pm with report of
	child with skull fracture, fixed/dilated
	pupils, posturing, and intubated - bilateral
	elbow extremity fractures, ? pelvic ← ? C-spine
	fracture. negative DPL by surgeon.
	We accepted pt. immediately to
	On my call back to Dr. we offered
transport	to transport, and he accepted because of child's
unstable	unstable situation. CT scan of
	head and Pelvic ~ 20% road. We left
	here 7 ²⁵ pm - arrival ~ 8 ³⁰ pm.
	CT revealed epidural hematoma on (R).
	Quickly loaded and transported.

USE ONE SIDE ONLY

PLEASE AUTHENTICATE EACH TRY

ROOM
NR
CPI

AGE - 5 800
AFC.
FIN. CLASS -
ADMIT DATE -

96

PP3

Progress Notes

(NOT for History & Physical)

DATE/TIME

	incomplete
	Past Hx from parents (incomplete)
	NKA
	No recent illnesses
	No drugs
	Immunization current.
	Exam (initially in ER and en route)
	intubated, unstable SVO sat
	HEENT: massive swelling; (R) orbit with skull defect palpated; CSF AD?
	neck: immobilized
	Chest: = breath sounds - palpation
	Heart: RRRS
	abd: no rigidity, soft, pulses
	ext: faint distal pulses; splints
	both CE's widely dilated fixed
	Mucous: pupils widely dilated, fixed
	alternating decerebrate/decorticate
	posturing
	no all 4, nothing purposeful
	CT scan in revealed large
	(R) epidural hematoma. Child loaded
	and transported. En route, tachycardia
	with SaO2 100%. Prepared to attempt

USE ONE SIDE ONLY

PLEASE AUTHENTICATE EACH ENTRY

ROOM PICU
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DOB -

FIN. CLASS
ADMIT DATE -

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f NAME:

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ROOM:

OPERATIVE REPORT

OPERATION:

Emergent evacuation of epidural hematoma secondary to large right frontoparietal hematoma.

COMPLICATIONS:

The patient coded during the procedure secondary to hypotension secondary to extensive blood loss prior to arrival. Blood given, blood pressure reestablished, and then a subdural hematoma formed during coding procedure secondary to a coagulopathy and low hemoglobin.

PROCEDURE:

The patient was taken to the operating room. She was placed under general endotracheal anesthesia emergently. She was prepped and draped in standard neurosurgical fashion. A vertical incision was made from above her ear approximately three-quarters of the way to her vertex. Retractors were placed and hemostasis was obtained in the skin. A single bur hole was placed right in the fracture site and a #3 was placed under the fractured bone and a 3 x 3 piece of fractured bone was removed using the fracture sites as the edges. A large epidural hematoma was identified and evacuated. At this point the patient's blood pressure dropped acutely after lowering of the intracranial pressure and the patient went into asystole. CPR was performed. The wound was emergently closed with staples. CPR was performed and after significant effort blood pressure was reestablished. The wound was reprepped and draped and reopened. At this time it was noted that the dura was tense and not lax as it had been prior to the epidural evacuation. The dura was opened and a large amount of watery blood came from within the wound. There was some difficulty obtaining hemostasis from the subdural hematoma secondary to coagulopathy. A partial right temporal lobectomy was performed to give room for additional edema. Once the epidural bleeding was completely stopped and the subdural bleeding was completely stopped, a loose dural suture was placed to give a place for drainage. The bone flap was laid back in place and not secured, and a subgaleal drain was placed in the epidural space and placed to a grenade suction brought out through a separate stab incision. There were no surgical complications of the procedure, but there were significant difficulties due to the preexisting coagulopathy and hypovolemia of the patient. A second peritoneal lavage was performed by the surgery team who are now going to perform an exploratory laparotomy to ensure there is no additional blood loss in the abdomen. The patient is in critical condition at this time.

M.D.

D: 96

T: 96 4:00 P

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AGE 001

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ADCT#1 F MED REC#:

DOB: 91 SERV:

MD: 96

DX: MVA/MULTIPLE TRAUMA

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VERIFIED RESULTS

REC#:

CONSULTING MD:

CONSULTING MD:

CONSULTING MD:

ORDER: (00000) C.T. SCAN OF-BRAIN 1.01

RADIOLOGIST:

DATE OF EXAM:

96

CT BRAIN WITHOUT CONTRAST AT ABOUT 9:50 P.M.

THE PATIENT HAS AN EPIDURAL HEMATOMA OVER THE RIGHT FRONTOTEMPOROPARIETAL AREA. IT MEASURES IN EXCESS OF 2CM IN GREATEST WIDTH. THERE IS MARKED COMPRESSION OF THE LATERAL VENTRICLES AND DISPLACEMENT TO THE LEFT. THERE IS NO HYDROCEPHALUS. THERE IS AN INTRACRANIAL PRESSURE MONITOR IN THE RIGHT FRONTAL AREA JUST ANTERIOR TO THE HEMATOMA. THERE IS A SKULL FRACTURE ON THE RIGHT EXTENDING UP THROUGH THE TEMPORAL BONE AND INTO THE POSTERIOR FRONTAL AREA. THERE IS A SLIGHT DEGREE OF DEPRESSION AND COMMINUTION. THERE IS SOME SUBCUTANEOUS AIR. THERE IS A FOCAL CONTUSIONAL TYPE HEMORRHAGE ON THE LEFT BETWEEN THE BASAL GANGLIA AND THALAMUS ON THE LEFT.

IMPRESSION:

1. LARGE RIGHT SIDED EPIDURAL HEMATOMA WITH SKULL FRACTURE.
2. SMALL CONTUSIONAL HEMORRHAGE IN THE LEFT INTERNAL CAPSULE-THALAMIC REGION.

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02:30 PM

AGE 001

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ADCT#: F
 008 91 SERV: MED REC
 MD: ADM: 96

DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

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REQ#:

ORDER: (00000) C.T. SCAN OF-BRAIN ABD/PELVIS 29.01

RADIOLOGIST:

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DATE OF EXAM: 96

CT SCAN OF THE BRAIN AT 12:49 A.M.

THE EPIDURAL HEMATOMA HAS BEEN EVACUATED. THERE IS MINIMAL RESIDUAL BLOOD. THERE IS AN EPIDURAL DRAIN ON THE RIGHT. THE VENTRICLES HAVE RETURNED TO A MIDLINE POSITION. HOWEVER NEW FINDINGS NOW VISIBLE INCLUDE A 6 OR 7MM LEFT FRONTAL SUBDURAL HEMATOMA. IN ADDITION THE CONTUSIONAL TYPE HEMORRHAGE IN THE INTERNAL CAPSULE-THALAMIC REGION ON THE LEFT IS SLIGHTLY LARGER. THERE IS STILL NO HYDROCEPHALUS. THE VENTRICLES ARE MIDLINE IN POSITION.

IMPRESSION:

1. ESSENTIALLY COMPLETE EVACUATION OF THE RIGHT EPIDURAL HEMATOMA HAS OCCURRED.
2. A LEFT FRONTAL SUBDURAL HEMATOMA IS NOW VISIBLE.
3. THE CONTUSIONAL HEMORRHAGE IN THE LEFT BASAL GANGLIA AREA IS SOMEWHAT LARGER AND THERE ARE SOME SCATTERED ADDITIONAL PUNCTATE AREAS OF PROBABLE CONTUSIONAL HEMORRHAGE INCLUDING IN THE RIGHT TEMPORAL AREA NOW VISIBLE.

CT SCAN OF THE ABDOMEN AND PELVIS

THE PATIENT HAS A MODERATE AMOUNT OF FREE FLUID WITHIN THE ABDOMEN. I BELIEVE THIS IS RELATED TO PERITONEAL LAVAGE. THE LIVER, SPLEEN, PANCREAS AND KIDNEYS APPEAR TO BE INTACT. THERE IS AN NG TUBE PRESENT. THERE IS SOME ATELECTASIS AT THE LUNG BASES WITH BILATERAL PLEURAL FLUID. THERE IS ALSO FREE FLUID WITHIN THE PELVIS. THERE IS A LEFT FEMORAL VEIN CATHETER PRESENT.

IMPRESSION: NO SIGNIFICANT ABDOMINAL ABNORMALITY SEEN. FLUID IS THOUGHT SECONDARY TO PERITONEAL LAVAGE. THERE ARE BILATERAL PLEURAL EFFUSIONS WITH SOME ATELECTASIS IN BOTH LUNG BASES. NO PNEUMOTHORAX IS

LASTPAGE

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03:02 PM

AGE 001

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ACCT#:

MED REC#:

DOB: 91 SERV:

MD:

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DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

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ORDER: (00354) CHEST PORTABLE 71010 31.

RADIOLOGIST:

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DATE OF EXAM: 96

3:30 AM

THE PATIENT HAS SOME CONSOLIDATION IN THE RIGHT MID LUNG ZONE PROBABLY IN THE LOWER LOBE. BILATERAL PLEURAL FLUID IS PRESENT AS SEEN ON THE PREVIOUS CT SCAN. A FLEXIFLO FEEDING TUBE IS PRESENT WITH THE TIP INTO THE DUODENUM. THE ET TUBE IS IN GOOD POSITION. THE RIGHT SUBCLAVIAN LINE IS IN THE PROXIMAL SUPERIOR VENA CAVA. THERE IS NO PNEUMOTHORAX SEEN. THERE ARE NO PREVIOUS CHEST FILMS FOR COMPARISON.

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03:02 PM

AGE

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ADCT#] F
DOB: 91 SERV: MED REC#
MD: ADM: 96
DX: MVA/MULTIPLE TRAUMA

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VERIFIED RESULTS

CONSULTING MD:
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RED#:

ORDER: (00280) SPINE LAT CERVICAL 72020 63.01

RADIOLOGIST: MD

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DATE OF EXAM:

96

C1 THROUGH T1 APPEAR NORMALLY ALIGNED. THE ET TUBE AND NG TUBE ARE
SEEN IN THE ANTERIOR SOFT TISSUE AREA. THE RIGHT FRONTOTEMPORAL SKULL
IS BARELY VISUALIZED. THIS IS BETTER SEEN ON PREVIOUS CT SCANS.

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03:02 PM

AGE 001

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ADCT#:

MED REC#:

DOB: 91 SERV:

MD:

ADM:

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DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

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ORDER: (00000) C.T. SCAN OF-BRAIN 48.01

RADIOLOGIST:

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DATE OF EXAM:

96

9:00 AM

COMPARED TO THE PREVIOUS STUDY THE PATIENT NOW HAS DEVELOPED A LARGE RIGHT FRONTOPIRIETAL INTRACEREBRAL HEMATOMA ADJACENT TO THE AREA OF THE EPIDURAL HEMATOMA. THE LEFT SUBDURAL HEMATOMA HAS EXTENDED POSTERIORLY SOMEWHAT OVER THE PARIETAL CONVEXITY AND MEASURES AN EXCESSIVE CENTIMETER IN WIDTH. IN ADDITION, A SMALL AMOUNT OF BLOOD IS NOW VISIBLE IN THE ATRIA AND OCCIPITAL HORNS OF BOTH VENTRICLES AND THERE IS A MIDLINE HEMORRHAGE WITHIN THE MID BRAIN AS WELL. THE LEFT TEMPORAL CONTUSIONAL HEMORRHAGE IS APPROXIMATELY THE SAME. THE VENTRICLES HAVE INCREASED IN SIZE AND ARE NOW BORDERLINE ENLARGED.

IMPRESSION: NEW AREAS OF HEMORRHAGE ARE IDENTIFIED AS DESCRIBED.

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03:03

PAGE 001

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ADULT# F MED REC#1

DOB: 91 SERV:

MD: ADM: 96

DX: MVA/MULTIPLE TRAUMA

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VERIFIED RESULTS

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CONSULTING MD:

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REQ#:

ORDER: (00000) C.T. SCAN OF-C-SPINE 64.01

RADIOLOGIST:

DATE OF EXAM:

96

CT SCAN OF THE CERVICAL SPINE FROM C1 TO T1 AT 3 MM INTERVALS:

THE CERVICAL ALIGNMENT IS NORMAL. NO FRACTURES OR SUBLUXATIONS ARE SUGGESTED.

ON THE LOWER MOST IMAGES THROUGH THE LUNG APICES THERE ARE SOME FOCAL ILL DEFINED DENSITIES PROBABLY REPRESENTING EITHER CONTUSION OR ATELECTASIS.

IMPRESSION: NEGATIVE CT OF THE CERVICAL SPINE.

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p. 6

02:22 PM

AGE 001

ADCT#

MED REC#:

DOB: 91 SERV:

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DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

CONSULTING MD:

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ORDER: (00454) TIBIA RT PORTABLE 73590 93.01

RADIOLOGIST:

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DATE OF EXAM: 96

THERE IS NOTED TO BE A TRANSVERSE FRACTURE THROUGH THE DISTAL ASPECT OF THE TIBIA AND FIBULA WITH MEDIAL DISPLACEMENT OF THE DISTAL FRACTURE FRAGMENTS.

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p. 7

02:22 PM

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ADCT# MED REC#
DOB: 91 SEP:012
MD: ADM: 98
DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

CONSULTING MD:
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ORDER: (00452) TIBIA LT PORTABLE 73590 92.01

RADIOLOGIST:

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DATE OF EXAM: 96

THERE IS NOTED TO BE ANTERIOR AND LATERAL DISLOCATION OF THE PROXIMAL
TIBIAL EPIPHYSIS.

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AGE 001

ACCT#

MED REC#

DOB: 91 SERV:

MD: ADM: 9

DX: MVA/MULTIPLE TRAUMA

VERIFIED RADIOLOGY RESULTS

CONSULTING MD:

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ORDER: (00368) FEMUR LT PORTABLE 73550 94.01

RADIOLOGIST:

DATE OF EXAM:

96

ROUTINE VIEWS FAIL TO REVEAL EVIDENCE OF FRACTURE, DISLOCATION,
INFECTION OR NEOPLASM OF THE VISUALIZED OSSEOUS STRUCTURES.

IMPRESSION: NORMAL LEFT FEMUR.

STENO:

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03:58 PM

ADCT#

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DOB: 91 SERV:

MD: ADM: 96

DX: MVA/MULTIPLE TRAUMA

VERIFIED RADIOLOGY RESULTS

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ORDER: (00370) FEMUR RT PORTABLE 73550 95.01

RADIOLOGIST:

DATE OF EXAM: 96

ROUTINE VIEWS FAIL TO REVEAL EVIDENCE OF FRACTURE, DISLOCATION,
INFECTION OR NEOPLASM OF THE VISUALIZED OSSEOUS STRUCTURES.

IMPRESSION: NORMAL RIGHT FEMUR.

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07:03 PM

ADCT#

MED REC#

DOB: 91 SEX: M

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DX: MULTIPLE TRAUMA

VERIFIED RADIOLOGY RESULTS

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ORDER: (00000) C.T. SCAN OF-BRAIN 131.01

RADIOLOGIST:

DATE OF EXAM:

96

NONCONTRAST AXIAL IMAGES WERE OBTAINED. THE EXAMINATION SHOWS RIGHT FRONTAL AND RIGHT TEMPOROPARIETAL HEMORRHAGES WITH MILD TO MODERATE MASS EFFECT. THERE IS A LEFT SIDED SUBDURAL OR EPIDURAL HEMORRHAGE WITH MILD MASS EFFECT. I SUSPECT THAT MUCH OF THIS IS SUBDURAL. THIS PASSES OVER THE LEFT PARIETAL AND LEFT FRONTAL REGION. THERE IS A LEFT FRONTAL INTRAVENTRICULAR DRAIN THAT HAS BEEN PLACED. THE VENTRICULAR SIZE IS SLIGHTLY SMALLER NOW THAN BEFORE. THERE IS SOME INTRAVENTRICULAR HEMORRHAGE. THERE IS MODERATE MASS EFFECT IN THE LEFT HEMISPHERE. THERE IS A HEMORRHAGE IN THE LEFT BASAL GANGLIA IN THE MEDIAL TEMPORAL REGION. THERE IS BLOOD IN THE THIRD VENTRICLE AND CEREBRAL AQUEDUCT. FLUID IS SEEN IN THE SPHENOID SINUS.

IMPRESSION: INTERVAL PLACEMENT OF A LEFT FRONTAL INTRAVENTRICULAR DRAIN OR INTRACRANIAL PRESSURE MONITOR. THE VENTRICULAR SIZE HAS DIMINISHED SLIGHTLY SINCE THE PREVIOUS EXAM. AGAIN NOTED ARE THE MULTIPLE HEMORRHAGES.

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ADCT#: MED R F
DOB: 91 SERV:
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VERIFIED RADIOLOGY RESULTS

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ORDER: (00454) TIBIA RT PORTABLE 73590 152.01

RADIOLOGIST:

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DATE OF EXAM: 96

5:30 PM

THE PREVIOUS FILM IS NOT AVAILABLE AT THIS TIME. THERE ARE TRANSVERSE FRACTURES OF THE DISTAL TIBIA AND FIBULA WITH ANTERIOR DISPLACEMENT OF THE PROXIMAL FRAGMENT. THERE IS OVERRIDING AT THE FRACTURE SITE. A CAST IS IN PLACE.

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03:01 PM

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ADCT# F
DOB# MED REC#

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DX: MVA/MULTIPLE TRAUMA

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VERIFIED RADIOLOGY RESULTS

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ORDER: (00402) KNEE LT PORTABLE 73560 151.01

RADIOLOGIST:

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DATE OF EXAM: 96

PORTABLE AP AND LATERAL VIEWS SHOW A SALTER I TYPE FRACTURE OF THE PROXIMAL TIBIAL EPIPHYSIS WITH DISRUPTION OF THE EPIPHYSEAL PLATE. THERE MAY BE A MINIMAL BUCKLE FRACTURE OF THE PROXIMAL FIBULA. THE TIBIAL EPIPHYSIS APPEARS SLIGHTLY ANTERIORLY POSITIONED IN RELATIONSHIP TO THE TIBIAL METAPHYSIS ON THESE TWO VIEWS. THE PREVIOUS FILMS ARE NOT AVAILABLE.

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APPLIED REEVALUATION RESULTS

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ORDER: (00000) C.T. SCAN OF-BRAIN 196.01

RADIOLOGIST:

DATE OF EXAM:

MULTIPLE 10 MM SLICES WERE OBTAINED FROM THE SKULL BASE TO THE VERTEX. IN THE AXIAL PROJECTION WITHOUT CONTRAST. TODAY'S STUDY IS COMPARED TO THE PREVIOUS STUDY OF 196 AND THERE HAS BEEN LITTLE IF ANY SIGNIFICANT CHANGE. ~~THERE~~ IS AGAIN NOTED TO BE AN INTRAVENTRICULAR DRAIN. THERE CONTINUES TO BE SOME INTRAVENTRICULAR HEMORRHAGE AS WELL AS A HEMATOMA OF THE LEFT BASAL GANGLIA AND ALSO A HEMORRHAGE IN THE RIGHT TEMPOROPARIETAL AREA. THERE ALSO CONTINUES TO BE A LEFT SIDED SUBDURAL-EPIDURAL HEMORRHAGE. THE BASILAR CISTERNS ARE NOT IDENTIFIED. THERE IS A MODERATE AMOUNT OF EDEMA.

IMPRESSION: HEMORRHAGES AS DISCUSSED ABOVE WITH A LEFT VENTRICULAR BRAIN AND A MARKED AMOUNT OF EDEMA AND PROBABLY HERNIATION. NO SIGNIFICANT CHANGE SINCE 96.

STENO: